



GOVT PUBNS



ROYAL COMMISSION OF INQUIRY INTO CERTAIN DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND RELATED MATTERS.

Hearing held
21 floor
180 Dundas Street West
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

Commissioner

P.S.A. Lamek, Q.C.

Counsel

E.A. Cronk

Associate Counsel

Thomas Millar

Administrator

Transcript of evidence for

June 18, 1984

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ROYAL COMMISSION OF INQUIRY INTO CERTAIN DEATHS AT THE HOSPITAL FOR SICK CHILDREN 2 AND RELATED MATTERS 3 Hearing held on the 21st Floor, 4 180 Dundas Street West, Toronto, Ontario, on Monday, the 18th day of June, 1984. 5 6 THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner 7 THOMAS MILLAR - Administrator 8 MURRAY R. ELLIOT - Administrator 9 10 APPEARANCES: 11 P.S.A. LAMEK, Q.C. Commission Counsel E. CRONK 13 D. HUNT Counsel for the Attorney General and Solicitor General L. CECCHETTO 14 of Ontario (Crown Attorneys and Coroner's Office) 15 Counsel for the Hospital for M. THOMSON R. BATTY Sick Children 16 Counsel for the Metropolitan D. YOUNG 17 Toronto Police 18 Counsel for numerous Doctors W.N. ORTVED at The Hospital for Sick 19 Children Counsel for the Registered F. KITELY 20 Nurses' Association of Ontario and 35 Registered Nurses at 21 The Hospital for Sick Children Counsel for Susan Nelles -J. SOPINKA, Q.C. D. BROWN Nurse 23 Counsel for Phyllis Trayner -G.R. STRATHY P. RAE Nurse 24 ... (Cont'd) 25



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1 APPEARANCES: 2 J.A. OLAH Counsel for Janet Brownless -3 R.N.A. S. LABOW Counsel for Mr. & Mrs. Gosselin, Mr. & Mrs. Gionas, Mr. & Mrs. Inwood, Mr. & 5 Mrs. Turner, Mr. & Mrs. Lutes and Mr. & Mrs. Murphy 6 (parents of deceased children) 7 F.J. SHANAHAN Counsel for Mr. & Mrs. Dominic Lombardo (parents 8 of deceased child Stephanie Lombardo); and Heather 9 Dawson (mother of deceased child Amber Dawson) 10 J. SHINEHOFT Counsel for Lorie Pacsai and Kevin Garnet (parents 11 of deceased child Kevin Pacsai) 12 13 14 15 VOLUME 156 16 17 18 19 20



Page No. ARGUMENT BY MR. SOPINKA ARGUMENT BY MR. STRATHY INDEX OF EXHIBITS Description Page No. No. Submissions by Mr. Sopinka.



1			ERRATA
2	Volume	154, June 1	.3, 1984
3			khu lomeliata priondousan ensi
4	Page	Line	are revisionale to everyone 2
5	1086	12	concerning the Phase II should read: concerning Phase II
7		14-	Attorney-General, therefore should read: Attorney-General, and therefore
8		19	I have and should read: I have no doubt, and
10		22- 23	Subsection 4: "Requires that no" should read: Subsection 4
11			requires that " no further proceedings
12	1087	2	"should
13		_	should read: "shall"
14		18	not unusual for should read:not usual for
15	1088	9	time as I anticipate should read: time I anticipate
16	1089	2-	First two paragraphs should read:
17		14	I am not suggesting or
18			encouraging that the parents take that action, but it is available to them and, as I say, if I prove
19			to be wrong I will happily adjust the proceedings accordingly, but
20			there are two reasons why I will not state a case.
21			The first one is that I am not
22			persuaded that I was wrong or even arguably wrong for the reasons I gave yesterday and the second is
23			that if I state a case, because of
24			(Cont'd)
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ERRATA: (Continued) Page Line Cont'd. the appellate procedures that are available to everyone, I am convinced that it will delay almost intolerably these proceedings. I think it is vitally important in all Commissions and perhaps particularly in this one that we try to avoid unnecessary delay.

Volume 155, June 14, 1984

Page	Line	
1107	22	quantitative credibility should read: qualitative credibility
1135	16	. In testing should read: <u>In testifying</u>
	23 ,	to a toxic episode. should read: to a hypoxic episode.
1148	6	was sudden an unexpected should read: sudden and unexpected
1152	7	naloxine thing. should read: naloxone thing.



EMT/ko

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--- On commencing at 9:30 a.m.

THE COMMISSIONER: I don't see any reason why we can't start now, Mr. Sopinka, if you want to.

MR. SOPINKA: Mr. Commissioner, I have distributed an outline of my submissions. In some aspects I will be following closely this outline; in others I won't. And certainly with respect to the technical evidence I will be following the outline, but I don't intend to repeat what is in there but merely to refer you to it because much of the evidence has been reviewed very ably by Commission Counsel and Counsel for the Hospital.

ARGUMENT BY MR. SOPINKA:

First of all I would like to refer to the submissions of Commission Counsel that there were some criticisms of the manner in which the Commission was conducted.

It is only natural in my submission that in a hard-hitting Commission such as this with a very emotional subject matter that there would be strong reactions from many parties, and it is not to be taken as a criticism of the Commission overall.

To some extent Susan Nelles, my client, has been identified with some of that criticism because



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of the role that we played in the proceedings in the Court of Appeal. I wish to say on behalf of Susan Nelles publicly that we consider that we have had a full and fair hearing by this Commission, and any criticisms that were made in Court were made in that spirit.

I also wish to say having acted as

Commission Counsel on a number of occasions myself

that Mr. Lamek and Miss Cronk have acted in the

finest tradition of Commission Counsel. We had no

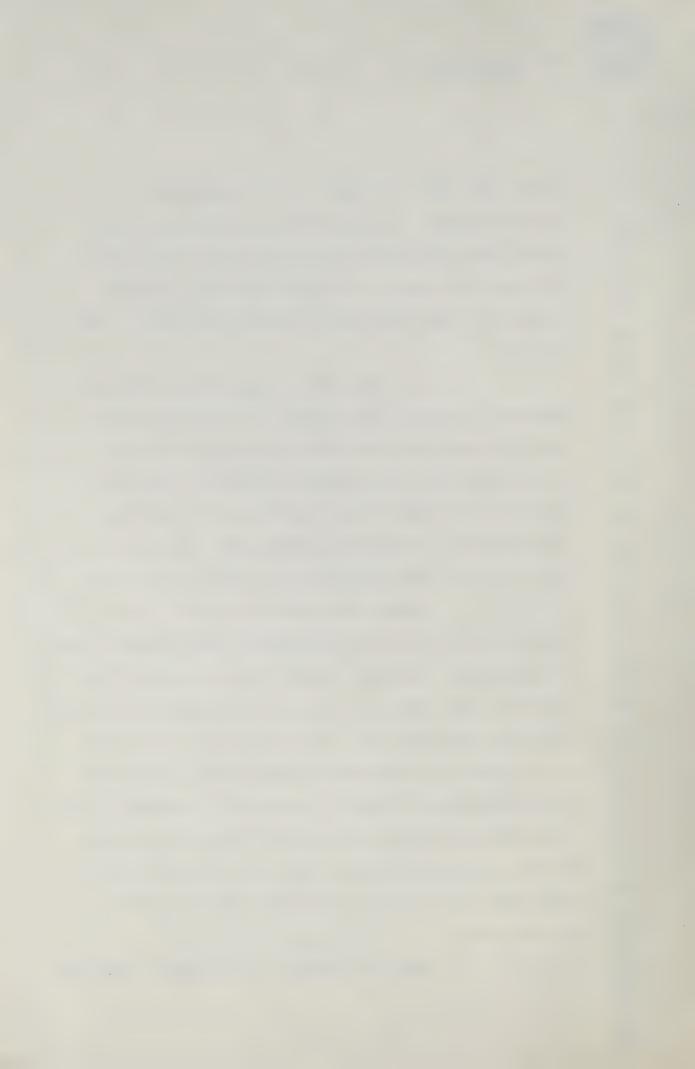
hesitation in submitting Miss Nelles to a private

interview with Commission Counsel that lasted for some

time, and that was handled in the same fair manner.

Now I say this not with a view to currying favour with the Commission but because I feel it sincerely. In other words I am not going to be like that apocryphal cartoon of an American court room. As you know, sir, in an American court room all motions are presented by approaching the Bench, and this cartoon shows the accused in a criminal case approaching the Bench and saying "Your Honour, just before you pass sentence I want you to know that the idea that you disqualify yourself was my lawyer's and not mine."

In the course of the inquiry into the



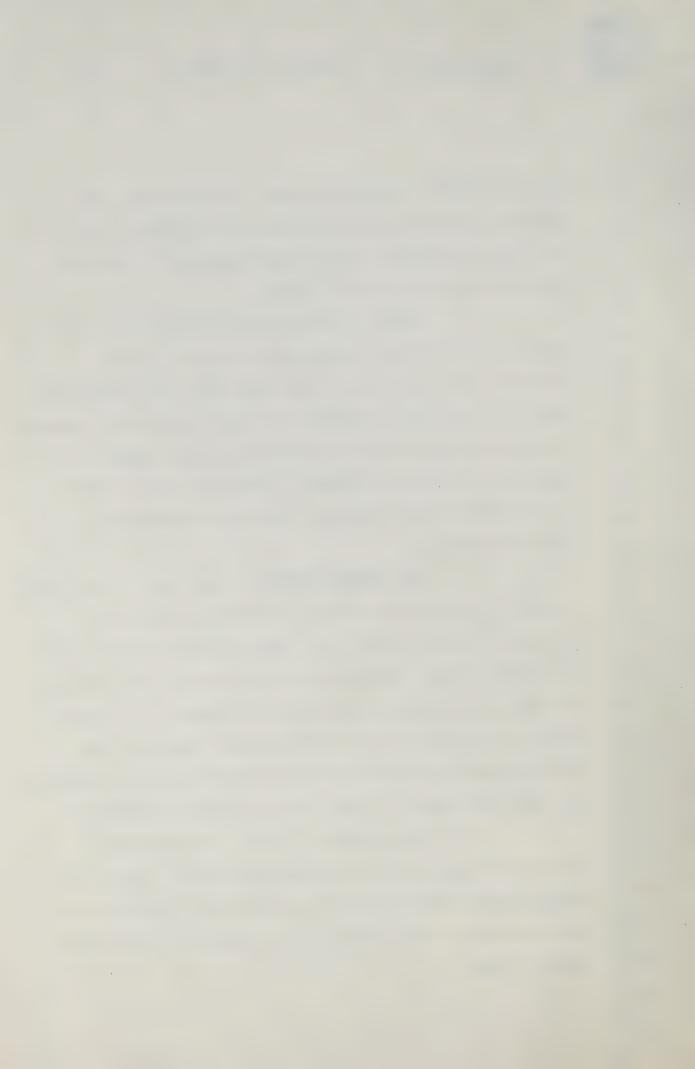
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cause of death evidence has been led which may tend to suggest involvement of some person or persons, and you are going to have to review that evidence in determining what was the cause of death.

Such a review would be impossible and would do violence to the evidence unless in some instances not only the act but the actor were mentioned. There is very little evidence of that nature with respect to Susan Nelles, but with respect to such evidence as there is, I intend to review it and urge you to adopt in your report the version of the facts contained in these submissions.

I don't know what it is you are going to say but I will wait for you to say it. But you will bear in mind the problem about referring to any evidence of identity is that by referring to evidence of identity you might identify somebody or you might exclude somebody from being identified which in either case would seem to offend at least the spirit of the Court of Appeal Judgement.

MR. SOPINKA: Well, I am going to limit it to an answer to Commission Counsel insofar as he suggested that there was a pattern and Susan Nelles was involved in that pattern as a member of the Trayner nursing team.



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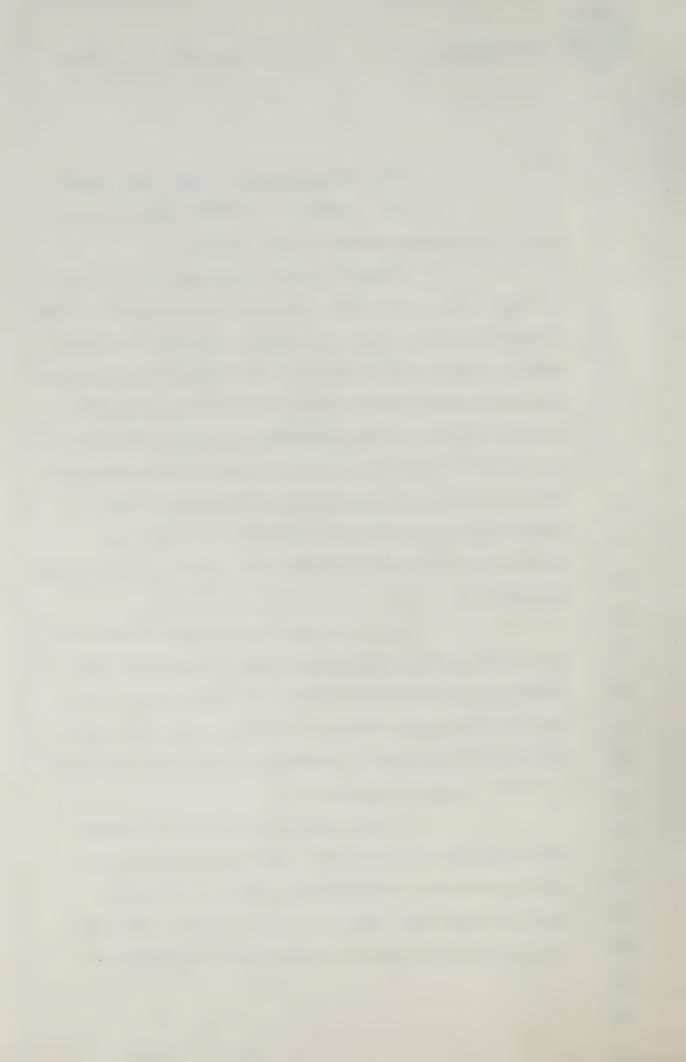
THE COMMISSIONER: Yes. All right.

MR. SOPINKA: I don't think you will find I am transgressing on that ruling.

First of all in determining the cause of death because of Susan Nelles' previous role in the proceedings that have taken place hitherto, I submit that it will be relevant for you to consider that she denied that she administered digoxin to a child for whom the drug was not prescribed, nor did she administer digoxin to a child in excess of the amount prescribed. Nor, as far as she was aware, did she mistakenly administer an overdose of digoxin to a child or mistakenly administer digoxin to a child not prescribed digoxin.

This evidence was not challenged in any way on cross-examination, and I submit that as a matter of fairness and indeed as a rule of law that implies acceptance of that testimony, and that you should not entertain a submission that that evidence was not a correct statement.

In his argument Commission Counsel submitted that the Commissioner in considering any particular death, whether any particular death resulted from foul play or natural causes, that you are entitled to consider evidence as to pattern or



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common threads; in particular the presence of one or more members of the Phyllis Trayner nursing team at the time of death.

Now in accepting for the purpose of this argument the submissions advanced by Commission Counsel, I submit that the presence of Susan Nelles on Wards 4A or 4B is not a common thread running through the deaths, the eight deaths that he mentioned. In other words, if there was a pattern she is not part of it.

Now Commission Counsel submits that there is evidence which would permit you to find that the deaths of eight children resulted from the deliberate administration of an unprescribed dose of digoxin: Justin Cook, Allana Miller, Kristin Inwood, Jordan Hines, Kevin Pacsai, Janice Estrella, Jesse Belanger and Stephanie Lombardo.

A comparison of the medical evidence regarding the possible times of administration of digoxin with the evidence concerning Miss Nelles' presence on the cardiac ward demonstrates in my submission that she was not - Miss Nelles was not a common thread linking these deaths.

Now dealing with these children, and what I am going to do is summarize the evidence with



respect to the range of time of administration. In other words, the most reasonable view of that medical evidence as to what is the range of the time of administration, and I wish to immediately point out that the doctors were not very confident about when administration took place, but they ventured opinions as to when it might have taken place and those opinions varied considerably. And insofar as there is a common ground I am trying to set it forth in this part of my argument.

With respect to Justin Cook, I submit that the weight of expert opinion suggests that a dose of digoxin was administered intravenously on March 22nd, 1981 between the hours of 1:30 a.m. and 4:25 a.m., and I have given you the references. Some of this evidence has already been reviewed in the argument of Commission Counsel, and this will be true with respect to each of these infants. I will then give you what the evidence is as to what Susan Nelles was doing at the relevant time.

Susan Nelles was assigned to care for Justin Cook on a constant care basis during the long night shift of March 21st. The evidence is that approximately from 2:30 a.m. until 3:15 a.m. on the morning of March 22nd Miss Nelles was relieved from



her constant care duties and took a luncheon break, spending most of the break at the nursing station on the ward. At the end of that break she returned to room 418.

Next, Allana Miller, a child in room

4A: the weight of evidence would indicate that the time
of administration could have taken place between 12:45
to 2:30 a.m. on March 21st.

Now on the long night shift of March 20th, 1981, Miss Nelles cared for Allana Miller until the arrival of Justin Cook at approximately 10:30 or 11:00 p.m.

Thereafter she was involved in admitting and caring for Justin Cook with the exception of administering a prescribed dose of ampicillin to Allana Miller at 11:00 p.m. and checking her heart rate at 11:45. These were both very brief attendances in that room.

Some time after 2:00 a.m. on March 21st, Miss Nelles was advised that Allana Miller had encountered difficulty. She went to Allana Miller's room and assisted other nurses in their presence suctioning the child. Dr. Soulioti arrived at the room shortly thereafter.



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Kristin Inwood was a child in room At the time of administration, according to the doctors, the most likely time, was between 12 midnight and 2:00 a.m. Miss Nelles was assigned to work on Ward 4A on the long night shift of March 12th, 1981. Mrs. Trayner testified that Nurses Halpenny, Harwood, Jones, Nelles and herself attended Kristin Inwood's room around 7:45 p.m. or 8:00 p.m. the evening of March 12th, 1981 because there was some concern for the child.

The only other evidence about what Miss Nelles did at the relevant time is that she testified that she believed that she was present during the resuscitation efforts of the Inwood child. There is no other evidence of any other times of access.

Jordan Hines was a child in Room 4B. At the time of administration, according to the weight of evidence , was between 1:00 a.m. and 2:10 a.m. on March 8th. Miss Nelles was assigned to act as Team Leader on Ward 4A on the long night shift of March 7th.

When the arrest of Hines was called Miss Nelles went to Ward 4B to assist in the resuscitation effort. There is no evidence that she





was in Ward 4B on any other occasion.

Next, Kevin Pacsai, child on Ward 4B. The pharmacologists were uncertain as to the mode of administration and their estimates of possible times of administration spanned a broad range.

Indeed, Dr. Kauffman, who alternated between an oral mode of administration and intravenous estimated that if it was orally the time of administration might have been six to twelve hours prior to the terminal events at 3:30 or 4:00 a.m. If it was by intravenous his estimate was three to six hours.

He couldn't really give a definitive opinion as to which mode of administration it was, but he said that he slightly preferred oral.

Dr. MacLeod estimates a time of

two hours before 5:30 a.m. and Dr. Mirkin estimates the earliest time of administration, two hours before 4:00 a.m.

Now, the evidence, with respect to
Miss Nelles, is that she administered a dose of
digoxin to Kevin Pacsai at the prescribed time of
9:00 p.m. on March 11th, 1981, and she testified that
she checked this dose with Mary Halpenny before
administering it. There is some evidence to
corroborate that. I point out that Mary Jean Halpenny



testified at the preliminary hearing that Miss Nelles checked the 9:00 p.m. dose with her.

Now, I should, in fairness, point out in cross-examination that she said that she couldn't be 100 per cent certain. Of course, nobody I guess can be 100 per cent certain.

There is further evidence that at the meeting at Liz Radojewski's house she confirmed that she checked this dose with Susan Nelles. I submit you should accept that evidence.

Susan Nelles further testified that from the beginning of the long night shift on March 11th, at 7:30 until midnight she spend about 45 minutes caring for Kevin Pacsai. She was present throughout the resuscitation efforts on Michelle Manojlovich from approximately 3:00 a.m. until 3:45 a.m. on March 12th. On returning to Room 431, as you will recall, she noticed that Pacsai's condition had changed.

The next child is Janice Estrella.

There is, of course, an issue as to the reliability of the digoxin level obtained from the pelvic cavity or the gutter blood. In this respect we adopt the submission of Commission Counsel that the better view is that it should be treated as being reliable.





To borrow an expression that occurred in these proceedings: "one out of fourteen ain't bad." I have summarized the evidence, some of which—

THE COMMISSIONER: One out of twenty—
five I think.

MR. SOPINKA: This confused me. Mr. Brown assures me that you can do it either way, because there were two samples, two tests taken of the same sample.

THE COMMISSIONER: It would have been a total 28, but there were two or three of them that were not taken for some reason, so I think it is really one out of twenty-five if you count both the time of the autopsy and three hours later.

MR. SOPINKA: Thank you, Mr. Commissioner.

I always like to state the most conservative view

of the evidence, but your odds are better, so I will

accept that.

With respect to the evidence, as to the time and route of administration, I review the on page 11 and I think it is sufficient for my purposes to say that there was no evidence before you that pushed back the time of administration to the day shift, which was when Susan Nelles was working. I should point out that the Crown attempted to do this



Hastreiter rather faintly adopted what was known as the slow drip theory that the digoxin was diluted substantially and took a long time to be administered. He was very effectively cross-examined with respect to that by Mr. Cooper and on Page 11, in paragraph E, I state that Dr. Hastreiter considered the route of slow infusion from the buretrol very impractical and very unlikely. That was the final conclusion that he came to. That was accepted by His Honour Judge Vanek in his reasons for judgement.

Now, dealing with what Susan was doing on the day shift during the long night shift of January 10th, 1981, Sui Scott was assigned to Janice Estrella in Room 423 on a constant care basis. Susan Nelles was not on duty on that shift.

assigned to Janice Estrella on a constant care basis during the long day shift on January 10th, testified that at the beginning of the long night shift she gave a report to Sui Scott and the child was turned over at shift change to Sui Scott, had been in constant care of Gloria Ganassin. Miss Ganassin testified at the preliminary hearing that during the long day shift on January 10th, she was relieved twice from her





constant care duties by Mary Cooney. Susan Nelles was on duty on Ward 4A during the long day shift. She testified that during that shift she did not have anything to do with Janice Estrella and she testified that she distinctly recalled taking her break with Miss Ganassin, which confirms the evidence that Miss Ganassin was relieved by somebody else.

Next, turning to Jessie Belanger, he was transferred from the Intensive Care Unit to Ward 4B on December 28th, 1980 at approximately 2:00 p.m.

The child developed difficulties at 6:30 p.m. arrested at 7:30 p.m. The time of administration varied from 2:00 p.m. to 6:00 p.m.

Now, I should point out that Dr.

MacLeod did testify that a dose of digoxin could have been administered to the child at any time during his 35 day life span, but that was an effort to account for the presence of digoxin, because this child was not prescribed digoxin and Commission

Counsel has dealt very effectively with that evidence and I submit that if there was a time of administration of an overdose the likely time was 2:00 p.m. to 6:00 p.m.





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TORONTO, ONTARIO

C/RJR/ko

THE COMMISSIONER: Dr. MacLeod was seeking to show it wasn't necessarily an overdose - anything is an overdose if you are not supposed to have it.

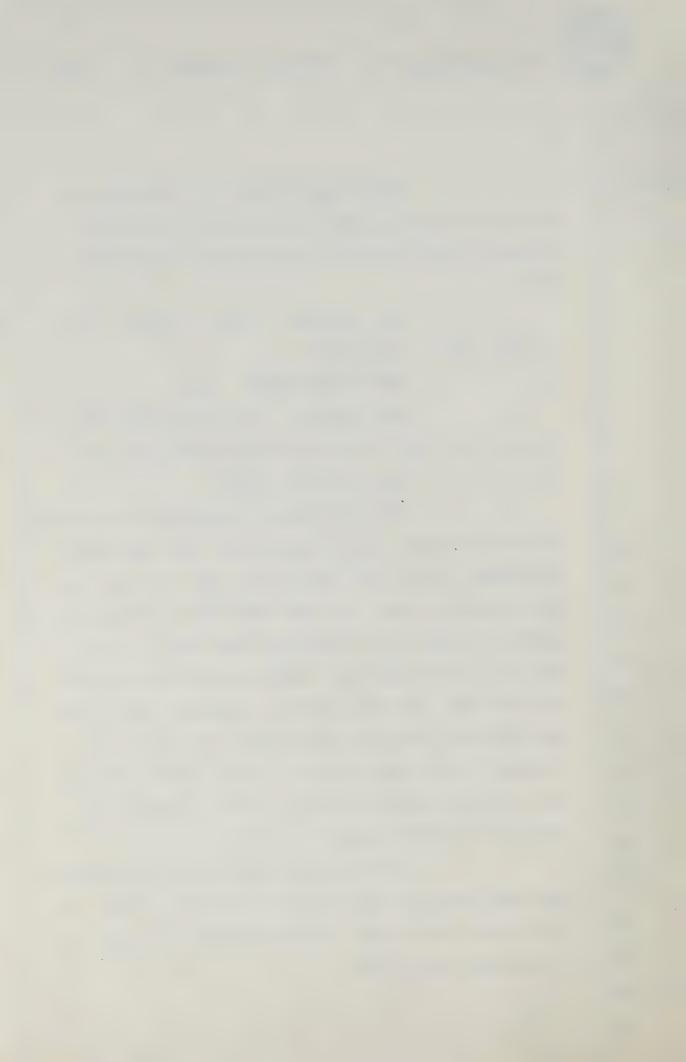
MR. SOPINKA: That is right. He is talking about a mistake --

THE COMMISSIONER: Yes.

MR. SOPINKA: A mistake could have happened and that's how you could account for this child having -- you are quite right.

Now, Miss Nelles testified that she did not work on Wards 4A, 4B, during the long day shift on December 28th. And, of course, this is borne out by the records when I say she testifies is when she worked. I mean, the records are here and I am not going to repeat what the records show, but that she did work the long night shift on December 28th. She recalled that the day team stayed the care for Belanger in the final stages of the arrest, although she may have assisted with the arrest because it occurred at shift change.

And Stephanie Lombardo was transferred from the Intensive Care Unit to room 418, on Ward 4A, on December 22nd, 1980. The child died at 4:20 a.m. on December 23rd, 1980.



Now, insofar as there was any reliable evidence as to the time of administration, I would say that the weight of evidence is that the most probable time was a few hours before 3:30 a.m., which was the onset of evidence of digoxin toxicity.

Susan Nelles worked on the long night shift on December 18th, 1980, and then she was away for about a week. Now, the long night shift, as we know, ends on December 9th, the long night shift of December 18th ends on December 19th in the wee hours of the morning, so she was not --

THE COMMISSIONER: Not so wee.

MR. SOPINKA: Some people. For lawyers, I mean. Doctors tend to start earlier.

And she was not back until the long night shift on December 27th, 1980. She said she spent December 22nd and 23rd, which are the critical dates, in Belleville and there is no evidence, of course, that she was taking a busman's holiday and was seen lurking around this ward during her days off.

To summarize, it is my respectful submission to you, sir, that in comparing the time-frames of administration of an overdose posited by the experts, and the evidence about Miss Nelles' presence on Ward 4A and 4B, the evidence supports the



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following findings:

First, Miss Nelles cared for Justin Cook and Kevin Pacsai during some but not all of the range of the estimated time of administration of an overdose.

Second, Miss Nelles was not caring for Allana Miller during the range of estimated times of administration of an overdose.

Third, Miss Nelles was on duty on Ward 4A the night Jordan Hines and Kristin Inwood died on Ward 4B but there is no evidence placing Miss Nelles on Ward 4B during the range of estimated times of administration of overdoses; and, indeed there is powerful evidence to the contrary.

Finally, Miss Nelles was not at the Hospital for Sick Children during the estimated times of administration of overdoses to Janice Estrella, Jesse Belanger and Stephanie Lombardo.

I submit that if Commission Counsel is right that they constitute a pattern, Miss Nelles was not part of that pattern.

THE COMMISSIONER: How can I put that in the report?

MR. SOPINKA: Just that way, in my submission.



it.

THE COMMISSIONER: How can I do it?

MR. SOPINKA: Well, if you review the evidence and you say -- if you mention the fact that the Trayner nursing team was present during all these deaths I submit that you cannot, you would be doing violence to that evidence unless --

THE COMMISSIONER: If I were to ...?

THE COMMISSIONER: Some members of the

MR. SOPINKA: To find out --

Trayner team was there during all of these deaths ...

Perhaps, I can say that. I mean, sure, I can say that

provided I can say that I can't specify which one

because to specify which one is an obvious, obvious -
is offending the principle of the Court of Appeal

Judgment. This is the difficulty in writing the report.

I don't know if I can get any help from you --; I would

be delighted to have it -- but I don't know how to do

MR. SOPINKA: I think I would like to refer you to something that you said in your Reasons of June 4th, 1984, the Court of Appeal. I mean, I am sure you have read this many times. It says:

"The Commissioner is obliged to hear all of the evidence relating to the cause of the death of the children



"and this would include evidence which tended to show that one or more of them died as a result of unlawful or negligent acts. While the Commissioner must not identify an individual as being legally responsible for a death, he should analyze and report upon all of the evidence ..."

Now, you have heard evidence that does identify not only the causes of death, but may tend to identify the actor. And in my submission there is a clear statement that you are to report on that evidence fairly, not to just --

THE COMMISSIONER: It may be a statement, it certainly isn't a clear statement.

MR. SOPINKA: I mean, for instance, if you said -- if you say Justin Cook was on constant nursing care, in the care of Susan Nelles, it obviously couldn't stop there without pointing out that there is evidence as to the time of administration and during part of that time she wasn't there. That is what I am talking about, a fair review of the evidence, and I think you contemplated this when at the bottom of page 27 in my factum -- or in my statement -- I quote what you said in your Reasons of June 4th:



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"While some of the evidence may have already pointed in a certain direction, Counsel may in argument focus that evidence more precisely on one or more persons with a view to showing the presence of that person or persons at the critical time of each death demonstrates a pattern from which an inference of digoxin poisoning can be drawn."

Now, I can do it the other way. If somebody is going to focus it my way surely I can focus it the other way. That is what I am saying.

THE COMMISSIONER: I'm not suggesting that you can't do that.

MR. SOPINKA: That is what I am doing. THE COMMISSIONER: What I'm really suggesting is that I am concerned about it too. And there is no absolute question that you can do justice by doing that, but what I want from you is help as to how --

MR. SOPINKA: Yes.

THE COMMISSIONER: If anything --Anyway, I can't translate that into the report.

MR. SOPINKA: Well, I think I can



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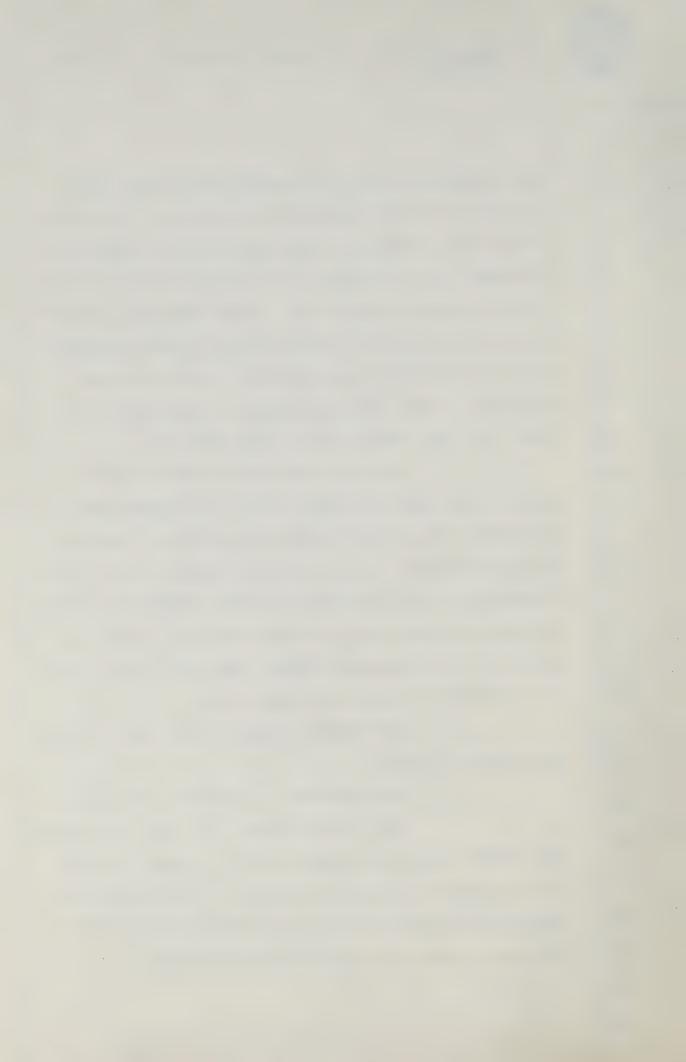
best illustrate it by the example that I gave that inevitably -- and I said this in opening -- you can't cut up this evidence in some cases without mentioning the actor, and if there is an inference that not only was the cause of death, say, an overdose but a certain person was involved, I submit that fairness requires you -- and nobody could possibly, in view of that statement of the Court of Appeal -- take issue with that, that you review all of the evidence.

Now, you may resile from actually saying "and that convinces me that that person was involved", that would be the safe course, I submit. But the evidence can be reviewed in such a way, in my submission, that the import of that evidence is clear. We see that every day by judges charging juries to give a fair and accurate charge, but the jury is left in no doubt as to what they are to do.

THE COMMISSIONER: Well, that is not my system of juries.

> I know it isn't. MR. SOPINKA:

THE COMMISSIONER: In the long distant days when I used to charge juries, I thought juries were supposed to decide not judges. It may be an old fashioned approach but I am here faced with a Court of Appeal looking at this precise situation.



EMT/hr

Now they didn't tell me precisely what I was to do, but they did say not to name a person who if I were to decide - first I would have to decide who it was - I could not name the person. Any time I excused any one person I must be pointing the finger now atsome other person. I can't help that.

MR. SOPINKA: I see that problem.
THE COMMISSIONER: Yes.

MR. SOPINKA: I don't think I can help you further than saying in some cases the evidence can be reviewed neutrally; that is without identifing anybody. In some cases it can't.

where that occurs, that is the evidence cannot be reviewed or related without also involving some person, than fairness requires that the evidence be reviewed, not only the evidence that suggests involvement but also the evidence that suggests that there is no involvement. That is the way with respect I submit that you should do it, and I would be glad to take your case before the Court of Appeal and read them that statement and ask them what they meant by it if that is not what they meant. I realize you don't need an intercessor in that forum .

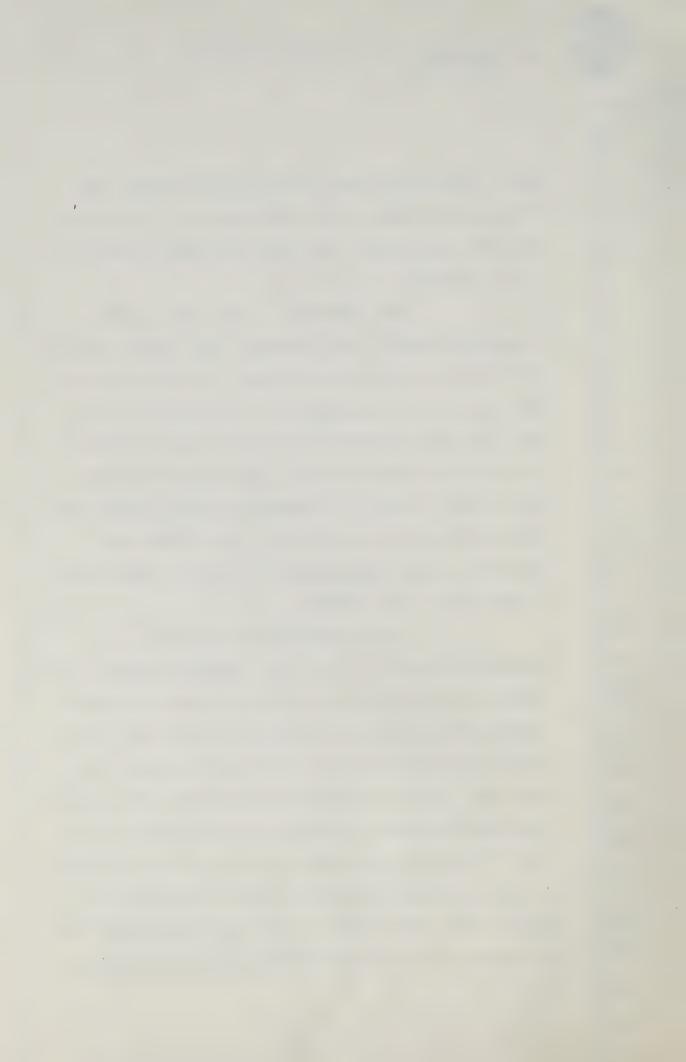
THE COMMISSIONER: Well, I can't ask



them. That might seem foolish to the layman but I can sit and have lunch with them but I can't ask them that question. I am not sure that I could do it civilly anyway.

MR. SOPINKA: I want now to turn to another area of the evidence, what we have called the strange or bizarre incidents. No doubt you will have to review this evidence. There are a great many of these incidents involving nurses working on 4A and 4B, and one incident when Phyllis Trayner was working on Ward 8: threatening phone calls were made, marks placed on lockers, car windows and apartment doors; propranolol pills were discovered in the food of two nurses.

In my respectful submission in considering whether or not the children died of a deliberate overdose of digoxin you should consider these events because it seems to me that is only really consistent with two possible alternatives: one, that there was some very assiduous knowledgable kook running about who was having himself a great deal of fun but had a great deal of inside knowledge. I submit that in considering that alternative you should take into account that there was a great deal of investigation not in respect to this particular





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matter but certainly the police were about, and that there would be some evidence of that if there was such an individual because it couldn't have been just somebody that walked off the street.

The other alternative was that the person who was doing these things and appeared to be - there would seem to be a common thread if I can use Mr. Lamek's expression - the more likely alternative is that that person was involved in the deaths of the children. And if you espouse that alternative it is my submission that the evidence is absolutely clear and uncontradicted that Miss Nelles was not involved either directly or indirectly.

First of all she testified that she did not engage in any of those things. She was doing very normal things during those events, and she related them in detail, and she was not cross-examined by anyone to suggest that any of that information which goes back a long time was inaccurate.

THE COMMISSIONER: Surely that,
though, did go to the evidence of - this was before
the Court of Appeal Judgement - surely didn't that
just go to the identity of the perpetrator?

MR. SOPINKA: Not in my submission.

In my submission I am not saying that it is - I think





it is very cogent evidence and I am not saying which alternative you should espouse, but it seems to me that in determining whether or not death was caused by deliberate overdose, if you concluded that the first alternative was wrong, that it couldn't have been a kook, then the second alternative would be very powerful evidence that it was a deliberate overdose of digoxin.

If you said someone was engaging in all these threatening calls and that someone was involved in these deaths (I haven't decided yet how they occurred) isn't that very powerful evidence that someone that was engaging in this strange behaviour didn't administer the digoxin mistakenly but this is very powerful evidence that ...

THE COMMISSIONER: All right.

MR. SOPINKA: It would show bizarre behaviour that might explain why someone would want to administer overdoses of digoxin to so many children.

THE COMMISSIONER: Okay. I will accept that, but then to go further and say Susan Nelles could not have been the perpetrator, how does that - how do I do that?

MR. SOPINKA: Now, in my submission I think you can review the evidence that she put in



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evidence of alibi with respect to every cone of those incidents.

THE COMMISSIONER: Well, why -

MR. SOPINKA: Because in a previous review of the evidence the inference might be drawn by reason of the nature of the review or because of her presence at certain times in the case of deaths of certain children that she was the perpetrator, and in fairness I submit that you can't ignore that evidence.

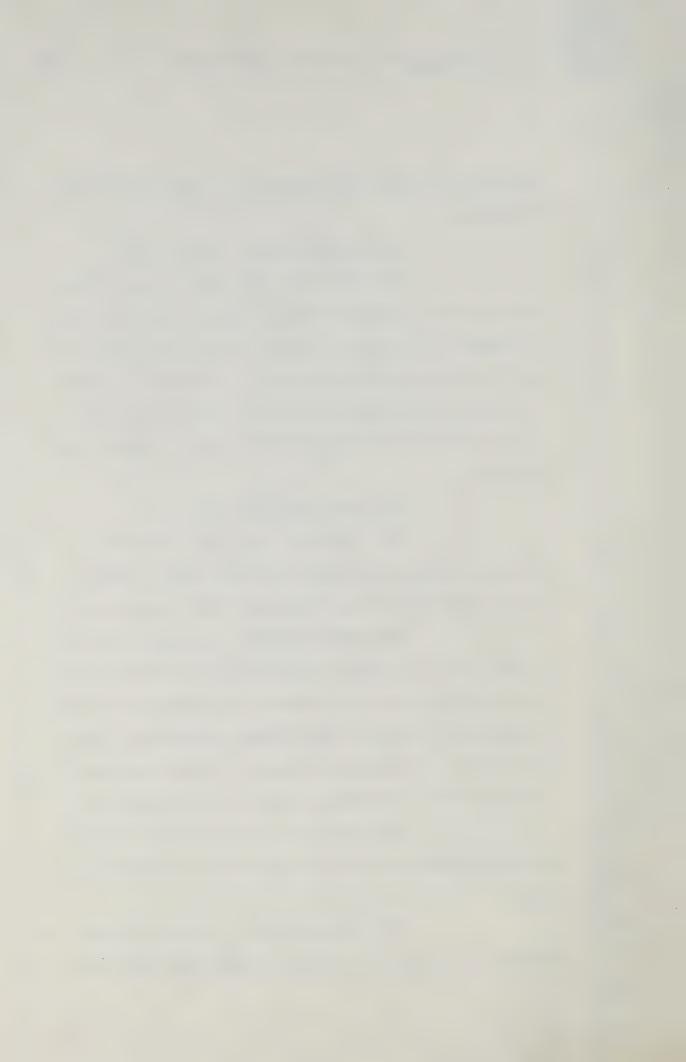
> THE COMMISSIONER: No.

MR. SOPINKA: And that doesn't identify anybody else but the chips have to fall as they may, and in my submission she is entitled -

THE COMMISSIONER: Perhaps I could go to the extent of saying Susan Nelles gave evidence indicating she was not present at seven out of eight or whatever it was of the bizarre incidents, but I can't say - I suppose presumably I could say that I accept that evidence or reject that evidence.

MR. SOPINKA: You could say nobody cross-examined on it and it was not challenged in any way.

THE COMMISSIONER: I obviously can't go so far as to say if I reach a conclusion that this



assists me in determining the perpetrator,

I can't go as far as to say she was not responsible

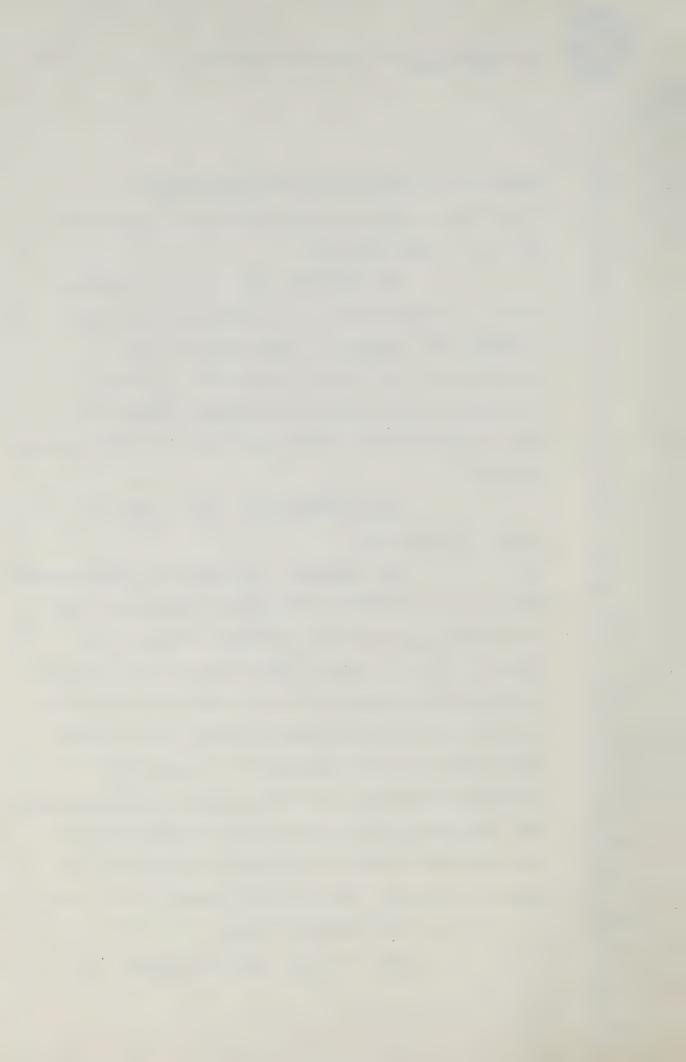
for it. I can't do that.

MR. SOPINKA: No. I'm just talking
about - I think you can go as far as to say, "and
I accept her evidence in this respect," Mr.
Commissioner. But I will be content if you say,
"and there is no evidence to suggest she did and it
wasn't challenged in any way and she is a very truthful
witness."

THE COMMISSIONER: It is sort of Alice in Wonderland.

MR. SOPINKA: Now then, Mr. Commissioner, there was some evidence of isolated departures from good nursing practice and incidents of what was alleged to be - I don't think it was as it turns out uncharacteristic behaviour and I want to review that. First of all I am sure that you recall the evidence and I refer to it in paragraph 16 on page 17 - paragraph 17 and page 17 - the evidence was overwhelming that Susan Nelles was regarded as an excellent nurse who worked well with her colleagues, cared for her patients and dealt well with the parents, and I have given you all the references there.

The friction that was alleged to



exist between her and Trayner which she frankly
admitted to some extent, was exaggerated in my submission
and was not uncharacteristic of what might be
found in any other comparable employment situation.

I have certainly seen much greater friction and it
didn't result in somebody dashing off and doing
something weird.

Now apart from - well I should say that I have canvassed all of these alleged departures from good nursing practice and uncharacteristic behaviour. There are not very many of them.

First of all Allana Miller was

prescribed to receive a dose of gentamicin at 1:00 a.m.

Mrs. Trayner administered it but Susan Nelles

mistakenly made the entry, and she quite frankly

admitted that that was a mistake.

It was said not to be good nursing practice, but apparently it does happen because Nurse Radojewski, and this is in paragraph (e) on page 19, said that she would remind a nurse that this was not accepted practice so in my submission it happens not frequently but it certainly happens, and I submit that any nurse working a year this would probably happen to her at least once and there is only one instance.





THE COMMISSIONER: Well, there is only one instance that comes to mind. I was, I won't say appalled, but I certainly did not approve of what was going on and I think the nursing supervisors didn't approve of what was going on. And I have a suspicion, and it probably won't be put in the report because I don't think it is important at all, is that it went on a great deal more than acceptable.

MR. SOPINKA: But not necessarily in the case of Susan Nelles.

on with her and it went on with everybody - but I

am not too sure it is any part of my mandate.I am not

here to tell the nurses how to conduct their business.

I am here to tell them if they signed for something that
they didn't do that some day something is going to

happen.

MR. SOPINKA: I agree entirely, but this evidence was led and I thought I should review it. If you find it in your heart to say that the evidence was that she was an excellent nurse, then I submit that this shouldn't colour your finding.

Now then there was this battle of the pacemakers and in my submission that was a tempest in a teapot.





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There was absolutely no evidence that it affected the care that was given to the child.

I suppose it was led as some kind of faint evidence of unusual behaviour that somebody could possibly draw the inference that somebody that fought over a pacemaker might in retribution go out and do something worse I submit and I have detailed the evidence there that it is really a tempest in a teapot.

I point out that Miss Coulson, the nursing supervisor, testified that this disagreement did not affect the qualitity of care given to Jordan Hines during the resuscitation, and Dr. Costigan didn't even recall it and he was present during the time.

Now then it was said by one witness and I think he was really sorry that he said it by the time it was all over that she was not showing enough grief and he obviously was not in a position he didn't know her and it is ludicrous to suggest that a nurse who was able to handle this without crying is somehow - that that should be held against her.

Then an incident in connection with

Justin Cook. Jacqueline Cook testified at the

preliminary that Miss Nelles advised her Justin Cook



was a sick baby and she should not look at the best but look at the worst because the child might not make it.

And Susan Nelles testified that Cook's parents specifically asked her about the emergency surgery scheduled for the next day.

Miss Nelles felt that the parents did not realize how sick the child was. Under those circumstances Miss Nelles testified she could not lie and she felt she had to tell them Justin Cook was a very sick baby and there was a chance that he might not make it through the surgery he was having the next day. And I submit that was a perfectly humane thing to do.

And certainly should not be taken into account in any way against Susan Nelles.

Then this expression six out of seven or whatever it was ain't bad: after the death of Justin Cook several nurses from the long night and the day shift heard Miss Nelles make the remark to the effect four or five deaths in seven nights not a bad record or six out of seven ain't bad or something like that.

Mrs. Bell testified that she took the comment as coming from a nurse that was very frustrated or perhaps disgusted with the whole situation. She



testified Miss Nelles was upset and looked frustrated and may have been crying.

Miss Frise testified that when she heard the comment she looked at Miss Nelles and then just went on her way and that the comment really didn't affect her at that point.

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She recalled the comment when she went home and rehashed the day.

Miss Mandal, at the preliminary hearing did say that she felt the comment strange and that Nelles had said it in a sort of flippant way, but she said that Miss Nelles often flipped her head when she said things.

Miss Nelles, quite frankly, conceded that she had said something to that effect, but she said it in frustration and what she said was: "Four children in seven nights. What a record, what a terrible record." She was saying it, not because she was being flippant, but as a matter of deep regret.

She also testified when she was asked to account for Miss Mandal thinking it was a strange remark, she said she wasn't there, she hadn't been on that shift, she wasn't involved in the atmosphere.

Those that were didn't think there was anything strange about it.

Then the next piece of evidence. There was a suggestion with respect to the death of Pacsai,
Miss Nelles had said that, something to the effect that
she was relieved after the death of Pacsai and the
inference initially was that she was relieved because
of the death of Pacsai. The effect of the evidence is,



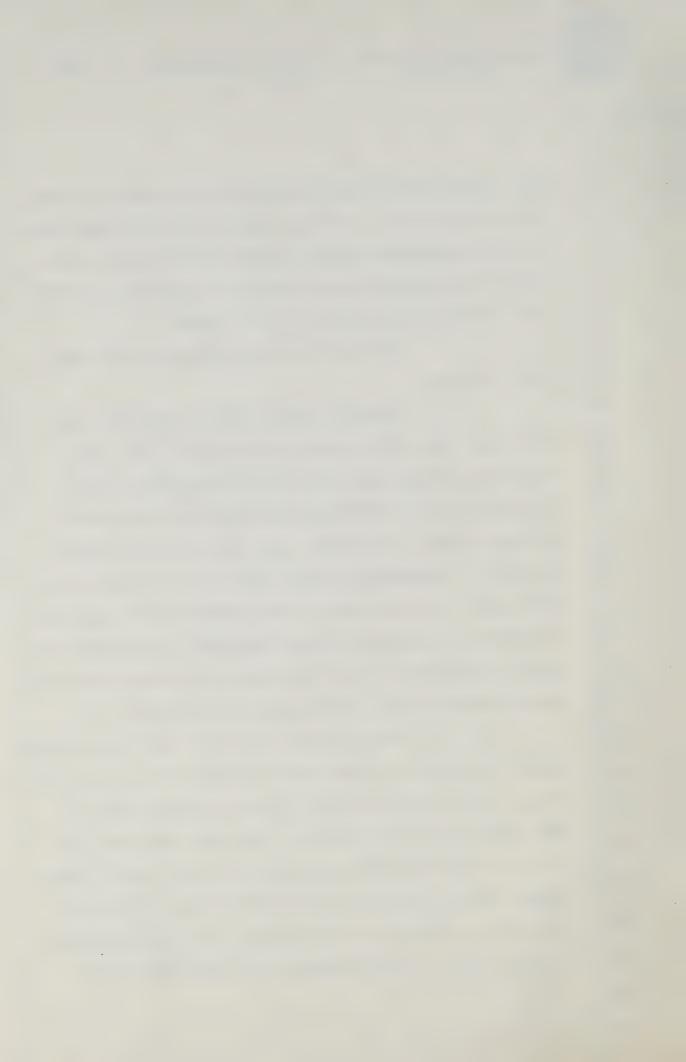
and I submit you should accept it as what she said was she was upset that a cardiac fellow had gone home after she had expressed concern to him and she said to Mrs. Trayner that maybe she was relieved, because now maybe the doctors would listen to the nurses.

I submit that Mrs. Trayner confirmed that version.

Finally, Miss Coulson testified that some time after the arrest of a child in 1981 she asked Miss Nelles how she was dealing with all the recent deaths and Miss Coulson testified that Susan replied: "Well, sometimes I feel guilty that I don't feel bad." Miss Nelles then discussed, or Miss Coulson discussed with Susan Nelles how nurses tend to express themselves differently after the death of children and such a discussion is one that Miss Coulson has had with other nurses in the normal course of events.

Susan Nelles testified that she made the remark probably in comparison to some of the other nurses on the floor since she did not show as much emotion.

You will recall her evidence, that she said life had to go on, you couldn't just dissolve into tears. Some people think you can just drop everything. There are many other children to look after. She said that when a child died it was extremely hard, but she had to



continue her work on the floor. She would try to keep control of herself after a death because she did not think she would be able to continue to function if she let herself simply dissolve into tears.

In reviewing the evidence and I think I reviewed such evidence as may tend to involve Susan Nelles, you will, of course, have to consider, or may have to consider the credibility of Susan Nelles. I submit, and you observed many witnesses, that she was a thoroughly forthright and credible witness. I can't remember one instance where her credibility was in any way shaken or even when she appeared to be evasive. She frankly admitted when she made a mistake and in all respects, I respectfully submit, that her evidence had the hallmark of a truthful and honest witness. She virtually bared her soul by going to the psychiatrists and psychologists and having them examine her and we put those reports forward.

I submit that she even lived up to Mr. Lamek's rigorous test of being herself. She was billed as being small but mighty and small, but mighty she turned out to be.

Thank you very much.

THE COMMISSIONER: Thank you,

Mr. Sopinka.



We have made Miss Cronk's submissions an exhibit. Is it all right if I make your submissions an exhibit?

MR. SOPINKA: I do have copyright on them.

THE COMMISSIONER: Copyright, oh yes.

I promise I won't incorporate any of it.

MR. SOPINKA: I won't complain about breach of copyright if you do. Feel free to quote from any part of it.

THE COMMISSIONER: Exhibit 424.

--- EXHIBIT NO. 424: Submissions by Mr. Sopinka.

THE COMMISSIONER: Yes, all right.

MR. SOPINKA: Thank you,

Mr. Commissioner, for accommodating me this morning.

I am much obliged. I hope you won't take it as an affront if I am allowed to go back to that other place.

THE COMMISSIONER: No, I won't at all. We may see you again, because we come back some time next week. We come back after this. All right.

MR. SOPINKA: Delighted to be here.

THE COMMISSIONER: Good.

Now, Mr. Strathy.

MR. STRATHY: I am quite content to



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begin now, sir, if you will permit me.

THE COMMISSIONER: I think perhaps ll o'clock would be a good time to break off.

MR. STRATHY: Fine.

ARGUMENT BY MR. STRATHY:

Mr. Commissioner, I was always taught that it was unnecessary and, indeed, perhaps improper to stand at the end of a trial and thank the presiding judge for his impartiality, his fairness and his patience. I was told that some trial judges considered it to be offensive and that they felt they need not be thanked for the performance of their sworn public duty. Well, Mr. Commissioner, at the risk of offending you and embarrassing you I do share with Mr. Sopinka the view that it is important that I perhaps, in particular, say publicly that, insofar as I and my colleagues at the counsel table, and most importantly, insofar as my client, Mrs. Trayner, is concerned, these proceedings have been conducted in a way which has been scrupulously fair to the participants and to characterize them in any other fashion is a misrepresentation of the facts.

There are those who wonder,

Mr. Commissioner, and I include myself among them,

whether your Mandate was not, in fact, an impossible



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one, whether it was possible to conduct a Commission of Inquiry into these 36 baby deaths, four of which have been the subject of criminal proceedings, without the proceedings becoming or being publicly perceived to be a trial by Commission. That is not, and I would not want it to be taken in any way as a criticism of the manner in which your Mandate has been carried out, it is simply a concern about the process, a concern which I know you and your Counsel clearly share and a concern to which you and your Counsel have been most sensitive.

I will be turning in a moment to my submissions, as to what, in fact, your Mandate is and it will be my submission that your task, at least a major part of your task, has been to permit the evidence concerning these deaths, the evidence of the cardiologists, the pharmacologists, the pathologists, the biologists, the epidemiologists, the statisticians and the evidence of the physicians and the nurses who actually cared for these babies, to permit this evidence to be laid out before the public and the parents in a way that is thorough, complete and, most importantly, in a way that is fair and in keeping with our concepts of fundamental justice and which, as the Court of Appeal has said, is traditionally our way of



doing things.

Mr. Commissioner, it is clear to all of us, who have had the privilege of being involved in this process, that you have accomplished that aspect of your Mandate.

I have spoken of the sensitivity of your Counsel, Mr. Lamek and Miss Cronk, to the risks inherent in this Inquiry, the risk, to put it bluntly, that individual rights will be trampled in the search for the truth and that these proceedings will become a trial without any of the protections of a trial.

May I say that your Counsel has gone out of their way to ensure, not only that these proceedings be publicly perceived to be fair, but that they be fair in fact as well as in appearance.

In a public hearing such as this,
which does not have the procedural safeguards to which
we lawyers are accustomed in the courts, and
particularly public inquiry into a topic which, by
its very nature, is shocking and sensational, there
is a great danger that witnesses and their counsel
may be surprised or, much worse, seriously prejudiced
by unexpected allegations or evidence. Your Counsel
have been scrupulous to ensure that this not occur.
They have at every turn resisted the temptation to catch



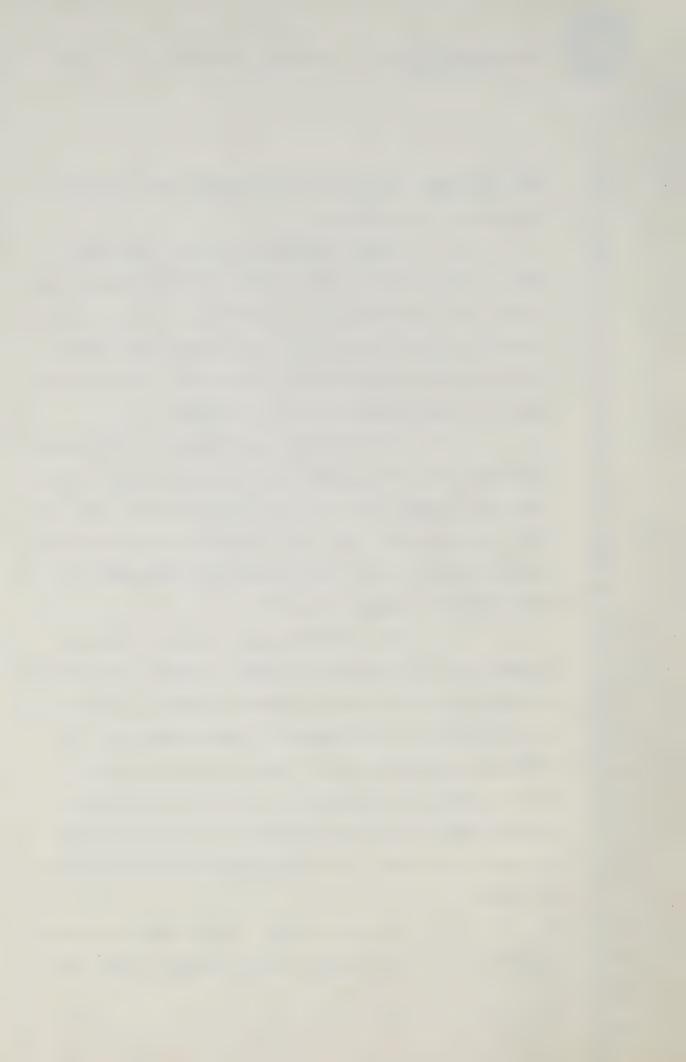
the headlines in favour of procedural and substantial fairness to the parties.

What the public sees in this hearing room is only a reflection of the meticulous work your Counsel have put into the presentation of the evidence. The public cannot know that your Counsel have never sacrificed the rights of any persons to the presentation of a sensational piece of evidence.

The fairness displayed by your Counsel and their sense of perspective has been carried forward into the argument that you have heard in the last few days, in that they have only commented on the relevant evidence and in a way that is fair and balanced and which sets an example to us all.

Mr. Commissioner, before I make my submissions, with respect to what I submit your Mandate or duty is, may I briefly comment on what I perceive to be my duty at this stage of the proceedings, so that you, and perhaps more importantly the public, will be able to understand my submissions in their context and so that you and the public are not left in doubt as to why I do not propose to address certain matters.

In your Ruling, with respect to public argument, Mr. Commissioner, you adverted to the fact



that in all the circumstances you felt it appropriate that these proceedings, the final submissions, be held in public. In the normal course I would not make submissions, knowing that one ear hearing me is the public ear. I would direct my submissions exclusively to you. In the circumstances I have said that I think it is important that the public understand what I am about to say and I think you will understand why I say that and why, to some extent, I think it important that the public understand precisely what my function is here today, even though I know that you and my friends understand that.

Mr. Commissioner, there are two things
I do not intend to do and that I do not consider it my
duty to do. Firstly, I do not propose to speak to
issues or evidence which are not relevant to your task
or which have not been put in issue by Commission
Counsel. If any of those who follow me raise other
issues or refer to other vidence I shall deal with
them in reply when it comes my turn on the second pass.
I would hope, however, that the advice you have given
in your Reasons for Decision concerning public argument
and the examples set by Commission Counsel and the
others, who preceded me, will make it unnecesary to
deal with irrelevant issues or evidence.



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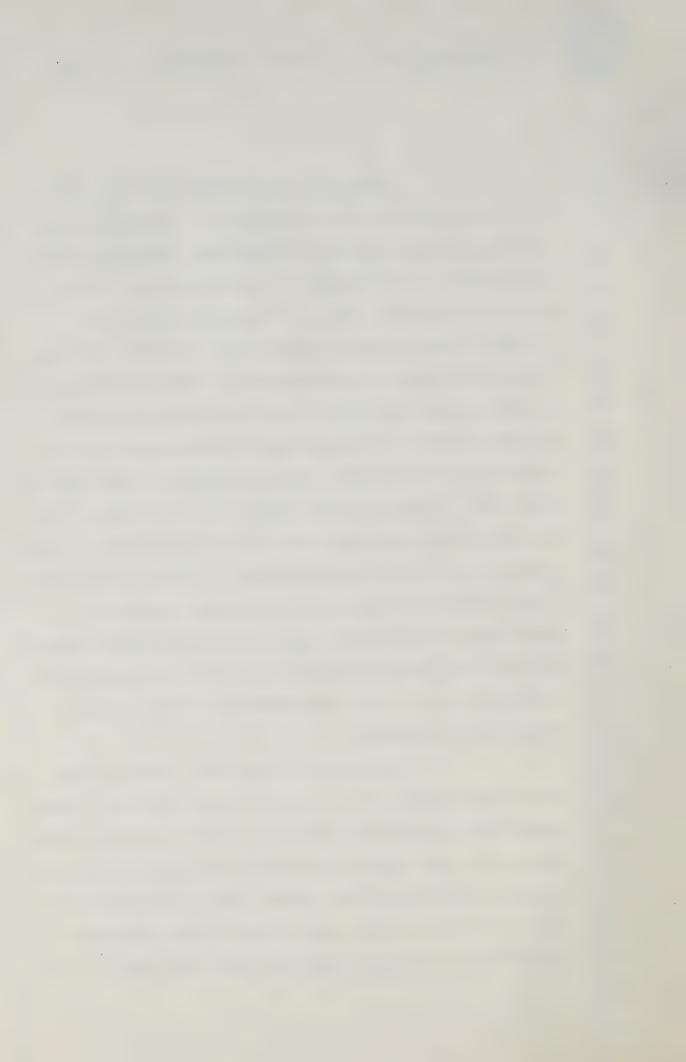
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Secondly, and perhaps most importantly, I do not consider it to be my duty or responsibility to stand before you and to defend Mrs. Trayner against non-existent accusations. To put it bluntly, there is no case to be met. Nor, on the other hand, do I intend to urge you to exonerate Mrs. Trayner. It has been pointed out by high authority that this Commission is not a trial and that it must not be permitted to become a trial. The unfortunate consequence of your inability to name names, as you, yourself, have pointed out, sir, is that you are unable to clear names. You are unable to exonerate and while I would like to stand here and ask you to make findings of fact, which would clear my client's name and restore her reputation, I know that to make that request would be futile, because you have no power to acquit or to clear any person or institution or to give that person or institution a clean bill of health.

Quite apart from that, however, and unless any member of the public or the media not understand why I am not required and do not propose to stand before you and defend my client, let me say this: Mrs. Trayner has answered for herself before this Commission and the public, on her oath to God, as Mr. Percival said, she has answered and her answer has been: "I did



not kill any of those babies."

Mrs. Trayner testified before you here and before the public on daily television for eight days. Up to that time she was the only witness, whose evidence was being broadcast daily on a continuous basis. She was cross-examined at length.

THE COMMISSIONER: When did they start? I thought they started somewhere in the middle of Susan Nelles.



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MR. STRATHY: I may be wrong -- oh, Miss Cronk advises me that it was some time in the middle, but I understood that it was Mrs. Trayner's evidence when it actually started.

THE COMMISSIONER: It started -- it was two or three days before I caught on.

MR. STRATHY: It was more than that before I caught on, sir, because I thought Mrs. Trayner was the first but I understand now that some of Miss Nelles' evidence was broadcast daily and all of Mrs. Trayner's was.

examined at length and in quite detail by a total of

12 lawyers, not including re-examination, and she
answered every question which you ruled was proper.

I think there was only one question, in fact, to which
objection was taken and which you ruled was improper,
apart from that she answered every other question that
was put to her.

These proceedings, Mr. Commissioner, provided Mrs. Trayner with the opportunity to come forward and to give her evidence and to stand before the public and to declare her innocence. It is, perhaps, unfortunate that to stand publicly and declare one's innocence under oath has become necessary in



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these circumstances, but in point of fact, Mrs. Trayner welcomed the opportunity to come before this Commission and tell her side of the story.

Mrs. Trayner has answered for herself, Mr. Commissioner, and, suppose like some of my colleagues, I could simply sit down at this point or withdraw from these proceedings. I do, however, feel an obligation to assist you, if I can, in your task both as to how you should approach that task, to offer you, as Mr. Scott has, certain guidelines or standards to apply in the decision-making process. And I also feel an obligation to put before you and comment on certain aspects of the evidence which have not been addressed by my learned friends that have preceded me.

I do not, however, propose to weave together the many strands of evidence, as Mr. Lamek has attempted to do, in order to put before you a theory to rival his killer-on-the-loose theory or to attempt to explain in some comprehensive way how, and by what means, all these children met their deaths.

For reasons for which I shall explain to you, Mr. Commissioner, I agree with Mr. Lamek that we may never have the satisfactory answers for most, if not all, of these deaths and I fear that any hope of putting forward an entirely satisfactory explanation



may be forever lost to us.

I am indebted to my learned friend,

Mr. Scott, for his nine standard which is put before

you and which I respectfully adopt and urge upon you.

I also adopt his suggestions with respect to the

caution which you should exercise in light of the

nature and quality of the evidence and his warning that
you not base your decision on evidence which is neutral
or inherently unreliable.

Something which I have learned from those older and wiser than me is not to improve, or attempt to improve, on advocacy of the quality that we have heard here in the past two weeks. Mr. Scott will be relieved to know that I don't propose by and large to attempt to improve on his submissions, particularly his standards or guidelines.

Maving said that, I should like to begin my submissions by making some observations as to what, in my respectful submission, your Mandate is in law, and I ask you, before you even reach Mr. Scott's standards, to look at the sign posts which you already have for yourself in law and which really are your only legal guidelines to assist you in your task. And I will be referring in just a moment to three sign posts. Your Terms of Reference, the statement made by the



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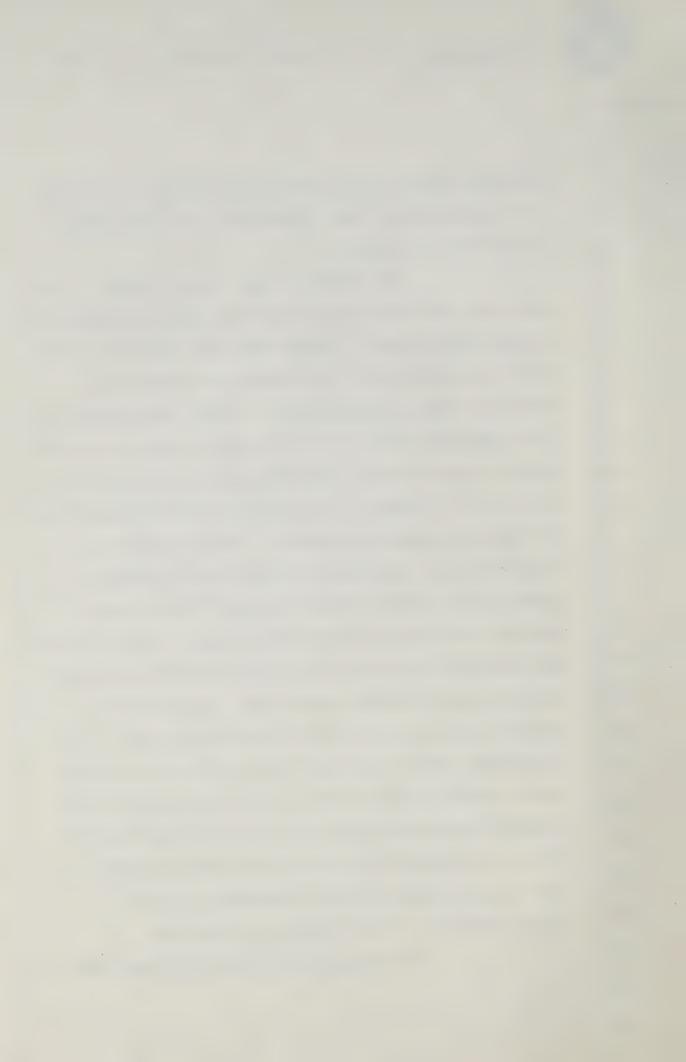
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Attorney General in the Legislature when he announced the appointment of this Commission, and the Judgment of the Court of Appeal.

Mr. Commissioner, in the course of the past two weeks you have at various times made reference to your Mandate and I submit that the very first thing that you must address in writing your report is precisely what is your Mandate. There are no doubt those who will feel, and who do feel, that it is your duty to unravel these mysterious deaths and to solve the puzzle. After all, the public likes mysteries but it likes its mysteries solved. There is nothing so frustrating as the jigsaw puzzle that is missing a piece or the murder mystery with the final pages missing. We like our mysteries solved. And there may be those that look to you for solutions particularly after so much time and effort and, quite frankly, public expense has gone into the work of this Commission, but I join Mr. Scott in urging you, with great respect, not to bow to what you perceive to be a public expectation and not to be concerned that a failure to decide any one or more cases will be, or will be perceived to be an abrogation of your responsibility, to put it in a delicate way.

I respectfully submit that you have no



legal or public duty to determine how any particular child died, let alone to determine how and by what means all the babies died. Still less, should you, if you are not satisfied with the evidence, indulge in speculation, voice an opinion or epxress a suspicion, whether low grade, medium or high grade.

So, I respectfully ask you not to feel compelled to do more than has been asked of you and not to accept data or evidence which is inherently unreliable simply for the sake of making a determination. I have no doubt that --

THE COMMISSIONER: I --

MR. STRATHY: Sorry?

THE COMMISSIONER: I just don't know, more or less - you may well be right, that may be the test; but looking at the way I had looked at it obviously I can't just speculate. I can't just say 'I have to'. I have to go one way or the other and, therefore, it is the sort of thing a jury has to do and the sort of thing a judge has to do, but I put it to Mr. Scott, what is wrong with my saying in certain cases I believe the child died a natural death, in certain cases, and I believe a child died of digoxin poisoning in the other cases? There is evidence that points both ways. One way or the other I am not



prepared to say one or the other but inherent in that sort of statement is that I am suspicious about the cause of death. I am suspicious that the child may have died from digoxin poisoning. What is wrong with that? Isn't that part of my Mandate?

MR. STRATHY: Let me go back a moment. I see the first part of your Mandate is that you don't have to determine at all.

THE COMMISSIONER: Well --

MR. STRATHY: I mean, in any

particular case -- and I will be referring to why I say that -- but in my submission you don't have to determine at all. It seems likely that if you are so satisfied on the evidence that a particular child - either by natural causes or because of digoxin administration - if you are so satisfied that you feel compelled to state that conclusion, you will state that conclusion even though I say you don't have to. But, I really join with Mr. Scott in saying that if there is a middle range where you are not so satisfied on the evidence that you are not able to state a conclusion, you really do not help anyone by doing more than simply laying out the evidence. In other words, you would satisfy your Mandate in all these deaths, in my submission, by simply laying out the



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evidence.

THE COMMISSIONER: Do I have to draw some conclusions?

MR. STRATHY: I say, in fact, if in law you are not obliged to draw a conclusion, you are not obliged to determine.

THE COMMISSIONER: I don't know what would happen if I didn't draw a conclusion, but that is not really ...

MR. STRATHY: Well, if you --

THE COMMISSIONER: ... I am required

to say.

MR. STRATHY: I am going to --

THE COMMISSIONER: Yes? I am sorry.

MR. STRATHY: Well, I am going to

come to this, but we might perhaps address it right now.

If you look at your Terms of Reference, the Order in Council, and let me just, if I may, develop this a moment ... If you look at the first page, sir, of 'whereases' and the third 'whereas' speaks of the Government of Ontario being of the view that there is a need for the parents of the deceased children, and the public as a whole, to be informed of all available evidence as to the deaths and the

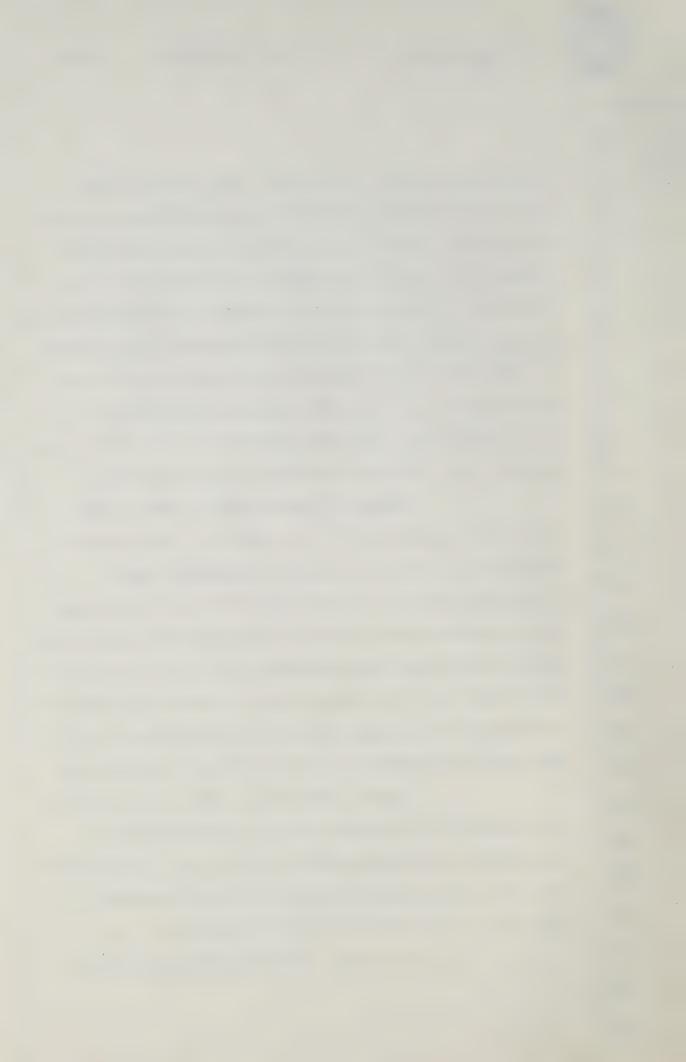


proceedings arising therefrom. Now, that is why I said a few moments ago that in my submission you have accomplished much of your Mandate because you have allowed the public as a whole to be informed of all available evidence as to the deaths and the proceedings arising therefrom, and you have allowed that evidence to unfold in a way that has been fair to the various participants. So, to that extent, a major part of your Mandate has been accomplished in a way that is in keeping with our notion of what is just and fair.

Then, if you go over a page, subparagraph 2, paragraph 2, it speaks of this power of
summoning of witnesses as the Commission deems
necessary to give evidence under oath and to produce
such documents and things as the Commissioner may deem
requisite to the full examination of the matters that
he is appointed to examine, and to ensure full public
knowledge of the completeness - "completeness" - of
the matters referred to in these Terms of Reference.

Again, the notion that a good part of your Mandate is to ensure public knowledge and presumably to promote public faith in our institutions, not only the Hospital but also our institutions involved in the administration of justice.

But then, sub-paragraph 3, which is



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the relevant one:

"To enquire into and to report on and make any recommendations with respect to how and by what means the children who died in cardiac ward 4A and 4B at the Hospital for Sick Children, between July 1st, 1980 and March 31st, 1981, came to their deaths."

It is interesting that the wording is "To enquire into and report on and make any recommendations with respect to how and by what means ... ", and it is interesting because if you look at sub-paragraph 4 -- I call it sub-paragraph, I think it is paragraph 4 -- there is a new word that comes into paragraph 4:

> "To enquire into, determine and report on the circumstances surrounding the investigation, institution and prosecution of charges arising out of the deaths of the abovementioned four infants."

It is interesting, in my submission significant, that with respect to the police investigation and the institution of the charges with respect



to that aspect, you were asked to determine where as with respect to how and by what means the children met their deaths. You were not asked to determine, you were simply asked to enquire into and report on and make recommendations.

THE COMMISSIONER: Sure. "How and by what means", they are not saying.

MR. STRATHY: I might have thought that too except if one looks at the Coroner's Act which everyone seems to concede was the model, at least in part, for your Terms of Reference. If one looks at that Act — it is Section 31, and I should have brought a copy for you but I didn't, it says:

"Where an inquest is held it shall enquire into the circumstances ..."

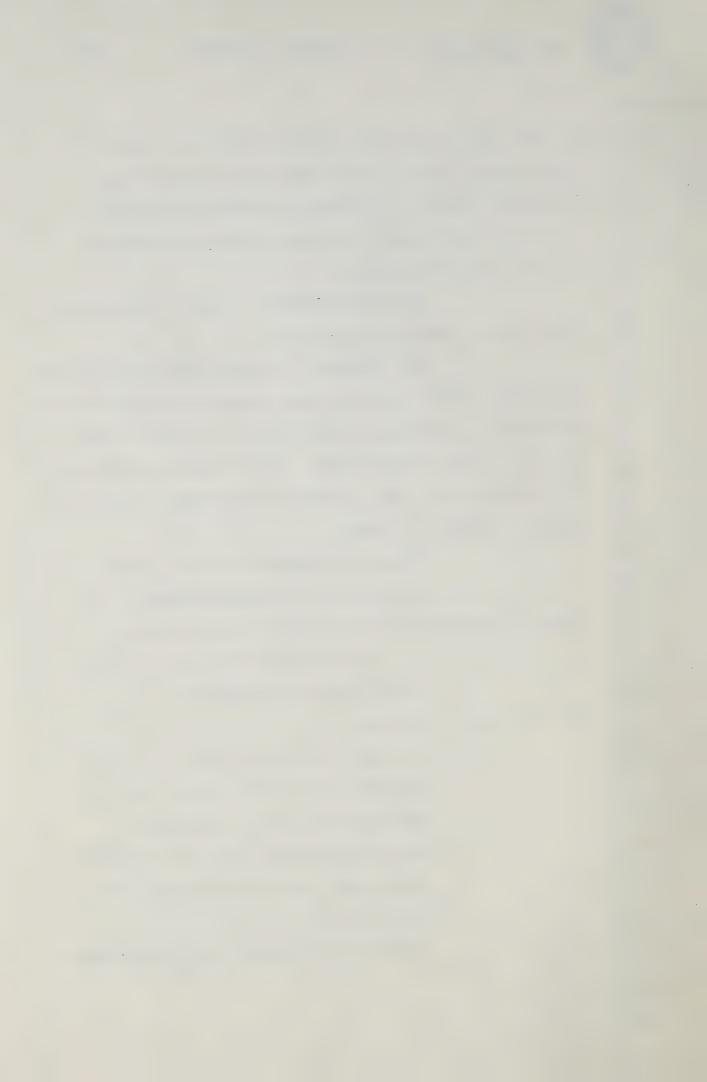
That, to some extent, is an echo of paragraph 4:

"... enquire into the circumstances of the death and determine ..."

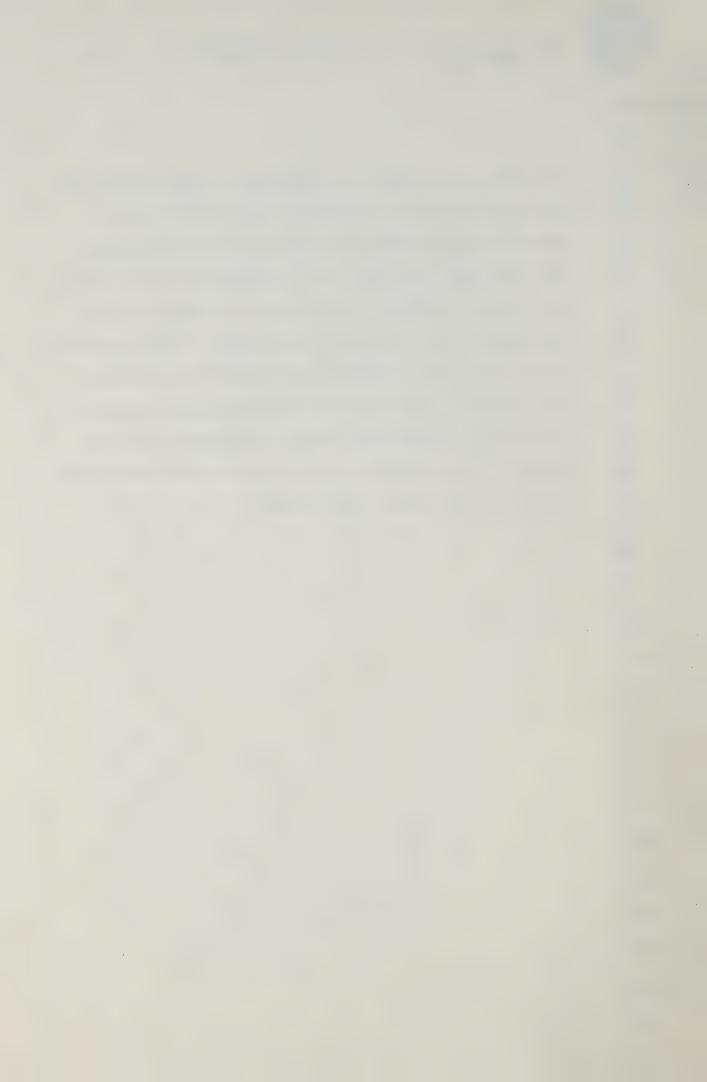
and this goes on to say:

"... who the deceased was; how the deceased came to his death; when the deceased came to his death; where the deceased came to his death and by what means the deceased came to his death."

So that in paragraph 31 of the Coroner's



Act, there is a specific reference to determining how and by what means the deceased came to his death, whereas in your Terms of Reference the determining part has been left out. And I suppose to some extent one can say expressio unius exprusio alterius rule would apply that you must - you ought to take something of significance or attach significance to the facts that there is "determine" in sub-paragraph 4 and not in paragraph 3 and that there is determined in the Coroner's Act and not in your Terms of Reference with respect to how and by what means.



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So I say in law whatever public obligation you may feel, sir, in law your terms of reference do not amount to a mandate that you determine or that you come to a determination in any particular case, and that is why I say I suppose I have to face the reality that if you are convinced in any particular case on the evidence you will feel obliged to state that conclusion. But what I do say is you don't have a legal obligation to state that conclusion, and that makes it all the more important that you not state such a conclusion unless you are satisfied with that as Mr. Scott says a very high level of assurance that you not state a conclusion in a particular case and that you do - you satisfy your task if you simply having inquiried into, report on, and report on the evidence that you have heard without going beyond that.

Now perhaps - well, I have the terms of reference out if I could refer briefly to the Attorney General's statement. I don't know - I didn't again bring an extra copy.

THE COMMISSIONER: I had it out so often in so many places but I don't have it. All right, I will know what you are reciting.

Mr. Strathy: Well, if I can briefly comment



on some of the things said by the Attorney General which in my submission gives weight to the notion that your job is accomplished by allowing the evidence to come out and then simply report on the evidence.

At the second page of the Attorney

General's statement in the Legislature I think it was
on April 22nd, 1983, on the second page the Attorney

General referred to the process of accountability
to the public in relation to the deaths, page two,

middle of the page he referse to:

"...the second matter I want to discuss has to do with the process of accountability to the public in relation to the deaths and the circumstances surrounding them."

An indication that one of the concerns was that the public be made aware of what evidence was available and what was known about the deaths.

Then on the next page again at the middle of the page, the Attorney General said:

"On my recommendation cabinet has
decided that there is to be the
establishment of a Royal Commission
of Inquiry to look into and report
publicly on the circumstances surrounding



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the deaths at the Hospital and the subsequent criminal procedings." Again no reference to determine or decide: simply to report publicly.

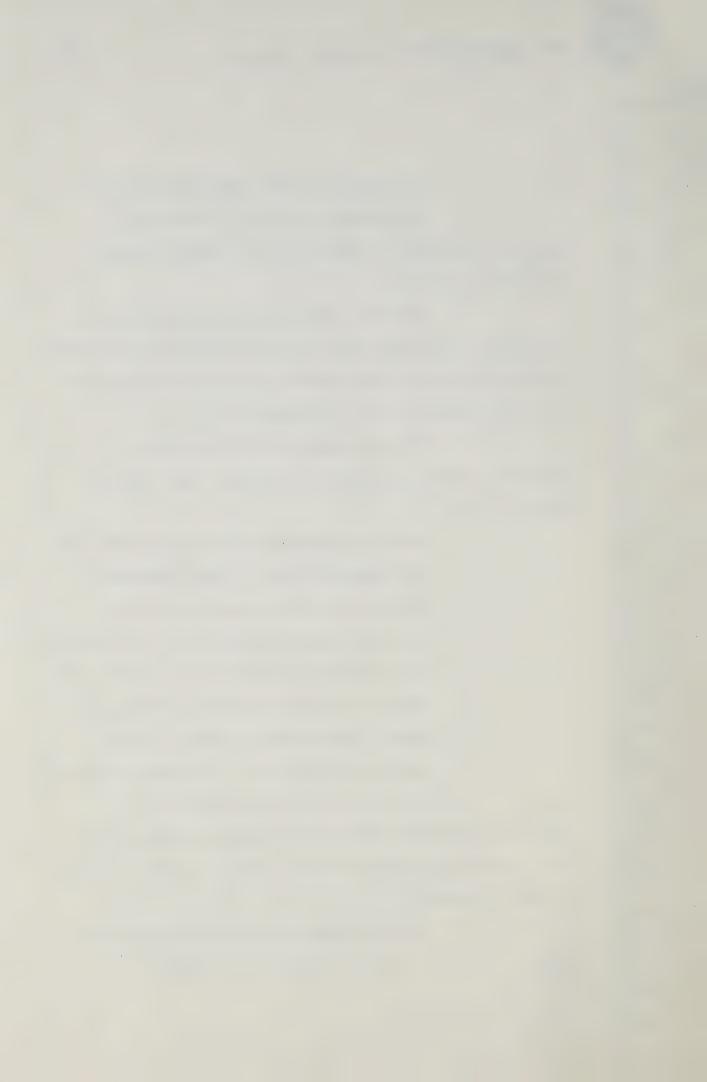
Then the Attorney General went on to say that it was not a part of your mandate to determine responsibility for the deaths or to come to decisions as to criminal or civil responsibility.

Then at page six of the terms of reference at the very top of the page the Attorney General said:

> "Having determined that there will be no criminal trial in the immediate future and having considered the jurisdiction and procedural limitations of a coroner'sinquest we are of the view that full public inquiry is the only method available to ensure a full public airing of all the facts referred to in the terms of reference."

Again an indication that what is being spoken of is not a public determination but simply a public airing of the evidence.

Then on page eight at the top of the



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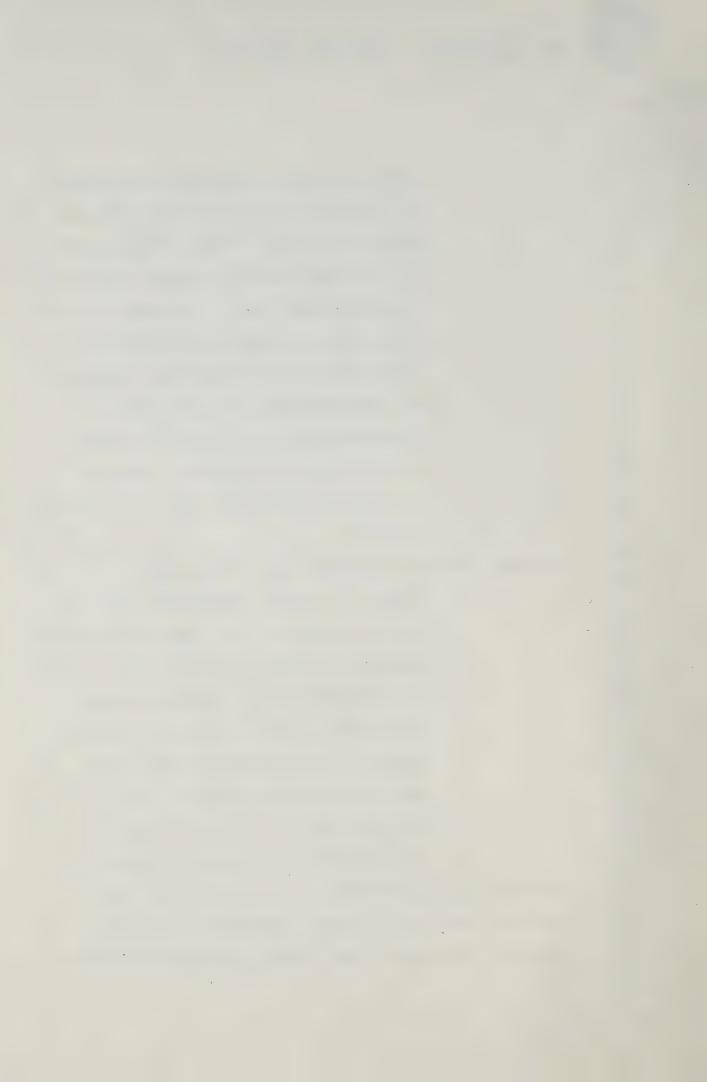
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"These terms of reference are designed to provide an opportunity for fullest public knowledge of the circumstances of the deaths and the criminal procedings which followed that. The qualification to which I referred earlier that the inquiry is not to express any conclusion of law regarding civil or criminal responsibility will serve to protect the interests of any past, present, or future litigant in civil or criminal matters".

And then the next paragraph is interesting:

"While it confers this protection it
does not restrict the Commissioner from
making the fullest findings of fact
and observations or recommendations
he may have short of determining any
question (any question) which is or
may ultimately be a matter for
determination in a court of law."
The comment., "any question" in my

submission is an interesting one because the only question the Court of Appeal addressed is the who question, but surely one, a major important question



in a criminal or civil trial would be: is it in fact as Mr. Lamek has suggested murder or intention?

Surely that question -

THE COMMISSIONER: Well, I think the Court of Appeal clearly stated that I might find whether it was deliberate or accidential.

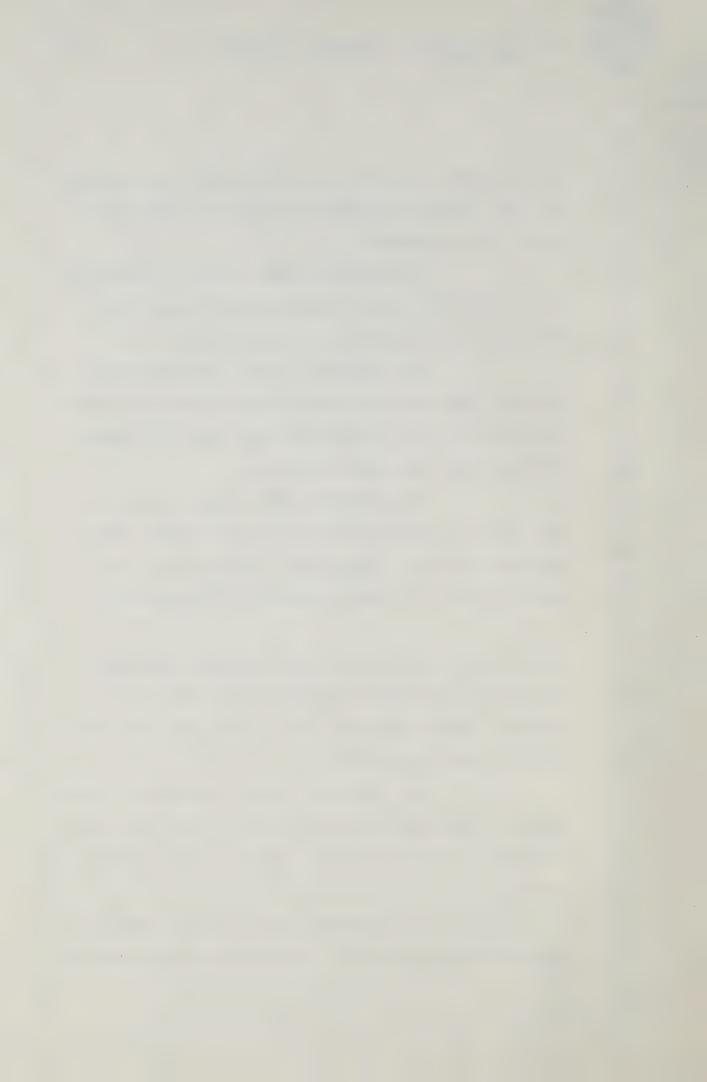
MR. STRATHY: Well, to some extent that may have been an obiter dictum because it wasn't something that was referred to the Court of Appeal although they did make reference.

THE COMMISSIONER: Well, it was because Mr. Justice Reid, and promptly by Mr. Scott, had said that the appropriate limitation was not to decide whether it was accidential or otherwise.

But to get to the other thing obviously the cause of death is an important question in civil or criminal responsibility. But if you take that away there is nothing left at all.

MR. STRATHY: That is so, but I think cause of death may be one thing but to take the step further and say intentional, knowing, i.e. murder is to -

THE COMMISSIONER: I don't intend to go into anybody's motives, but whether it was done by





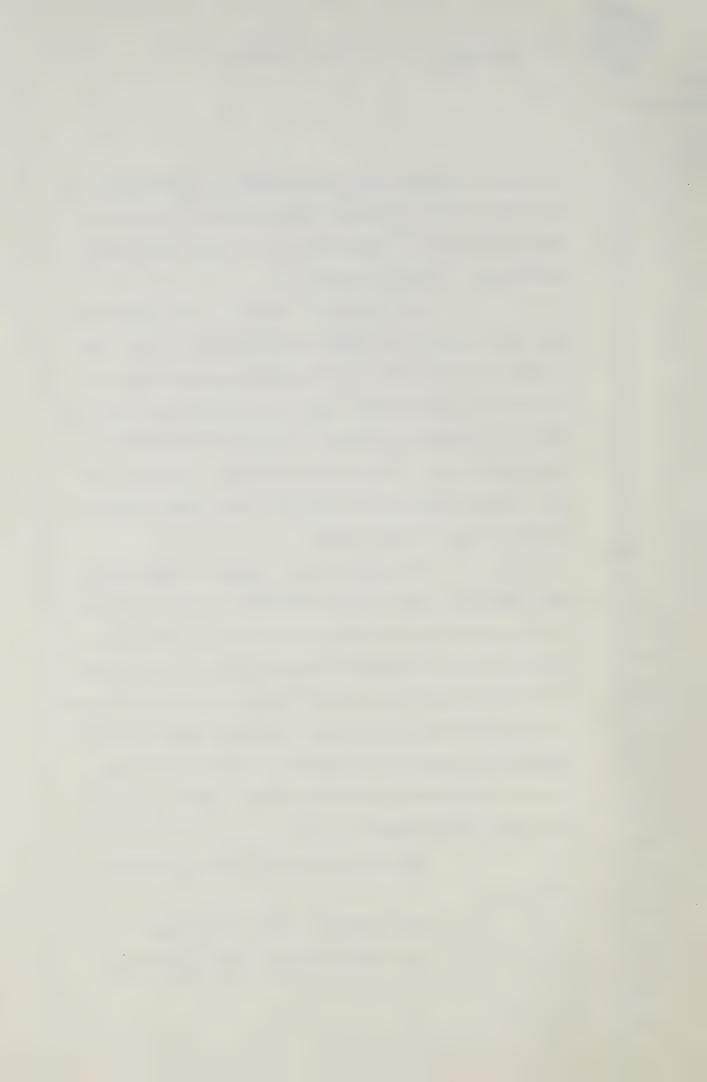
accident, a great deal of evidence, a great deal of argument so far has gone into whether it could have been accidental. Obviously if it could have been accidental I should say so.

MR. STRATHY: Well, in my submission the way to deal with that is simply to lay out the evidence on one side as to accidental; on the other side as to intentional, and not necessarily take the step of saying on balance I prefer the evidence as to intentional. It may be a faithful discharge of your responsibility to simply set out that evidence on both sides of the issue.

It seems to me - again I know that in law what the Attorney General says in the Legislature is not necessarily binding as to how you are to interpret your terms of reference, but it does seem to me that when the Attorney General was speaking as to what the purpose of this Commission was he was suggesting that the Commission would not be bound to make determinations of the sort that Mr. Lamek has urged you to make.

THE COMMISSIONER: Would this be a good time?

MR. STRATHY: May I just make THE COMMISSIONER: Yes, certainly.





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MR. STRATHY: - make one last before we put away the terms of reference? On the very last page, Mr. Commissioner, -

THE COMMISSIONER: Of the Attorney General's statement?

MR. STRATHY: Yes. The Attorney General says:

"There is, of course, no guarantee that all of the unanswered questions will be resolved as a result of the inquiry. However, it does present the most appropriate mechanism for a high degree of public disclosure. Its deliberations and findings I am sure will underline the importance of the accountability of society's great institutions to the public whom they serve."

I think that reflects two things:

firstly, the public airing aspect of your mandate

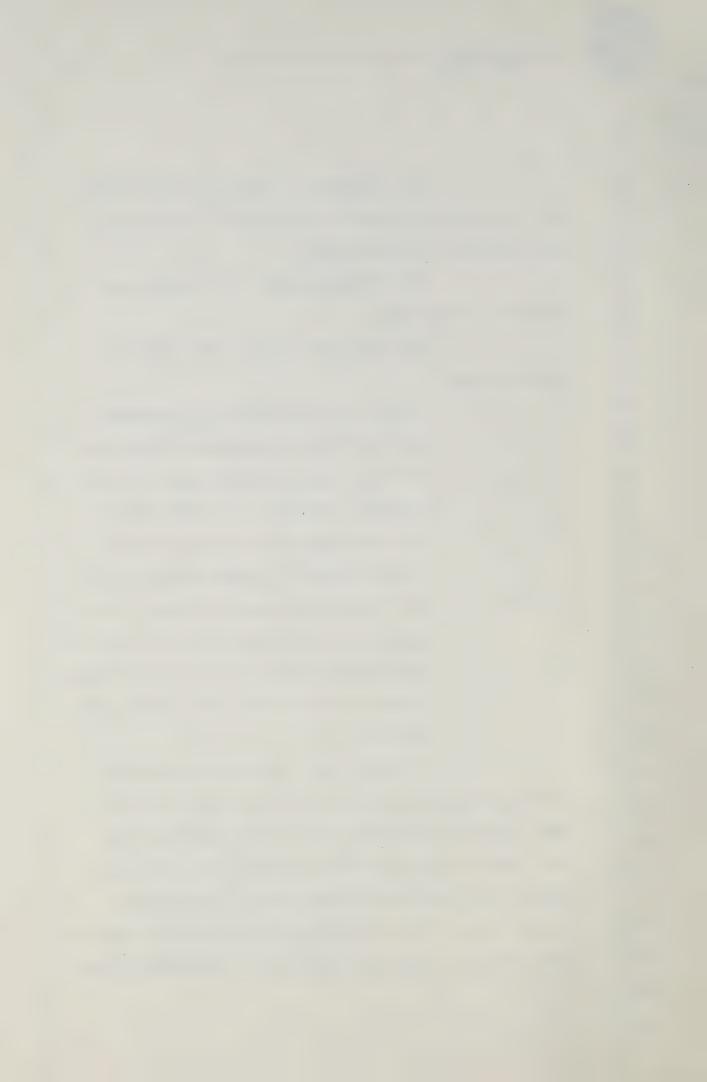
that I have already referred to and secondly the

fact that it was not contemplated by the Attorney

General that you would come forward and produce

answers to all the questions or even that you should

feel obliged, the fact that that is expected of you.





Now	I	think	this	would	be	• •	•	thank	you
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We will take 20 minutes.

---Short recess.





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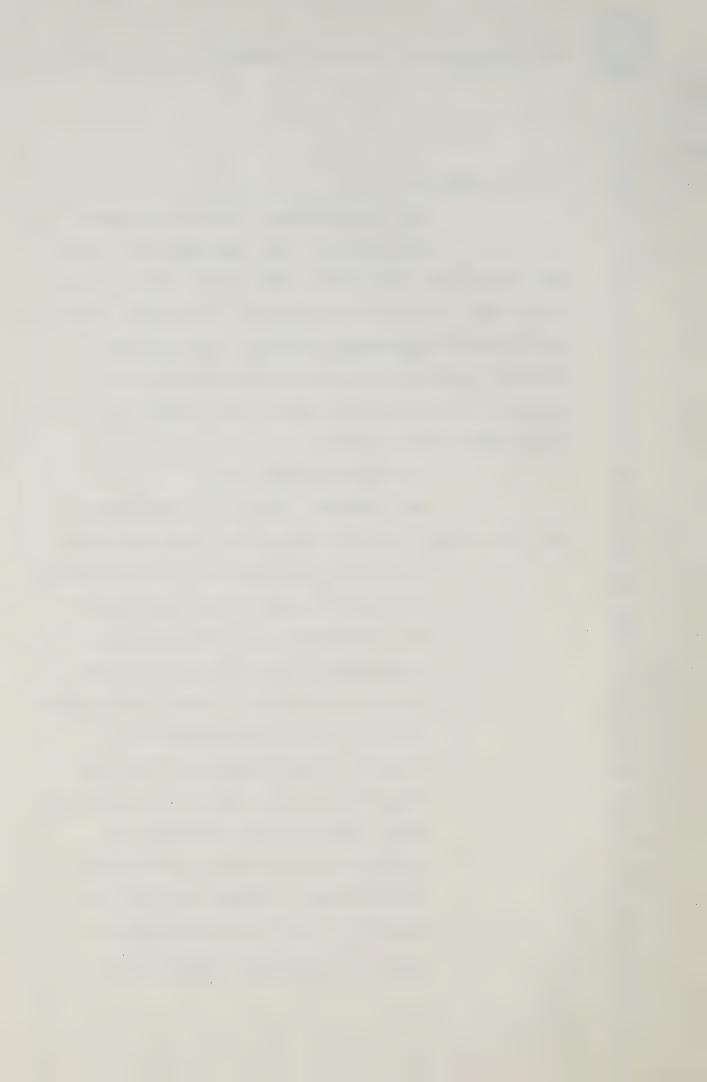
THE COMMISSIONER: Yes, Mr. Strathy.

MR. STRATHY: Mr. Commissioner, before the break I was referring to the three existing sign posts that you have to guide you in your task, firstly, your terms of reference; secondly, the Attorney General's statement and the third sign post is a decision of the Court of Appeal and I wonder if I could refer to that briefly.

THE COMMISSIONER: Yes.

MR. STRATHY: Page 16 of the reason, the decision at the top of the page, the Court says:

"Further, the fact that the findings or conclusions made by the Commissioner are not binding or final in future proceedings is not determinative of what he will decide. What is important is that a finding or conclusion stated by the Commissioner would be considered by the public as a determination and might well be seriously prejudical if a person named by the Commissioner as responsible for the deaths in the circumstances were to face such accusations in further

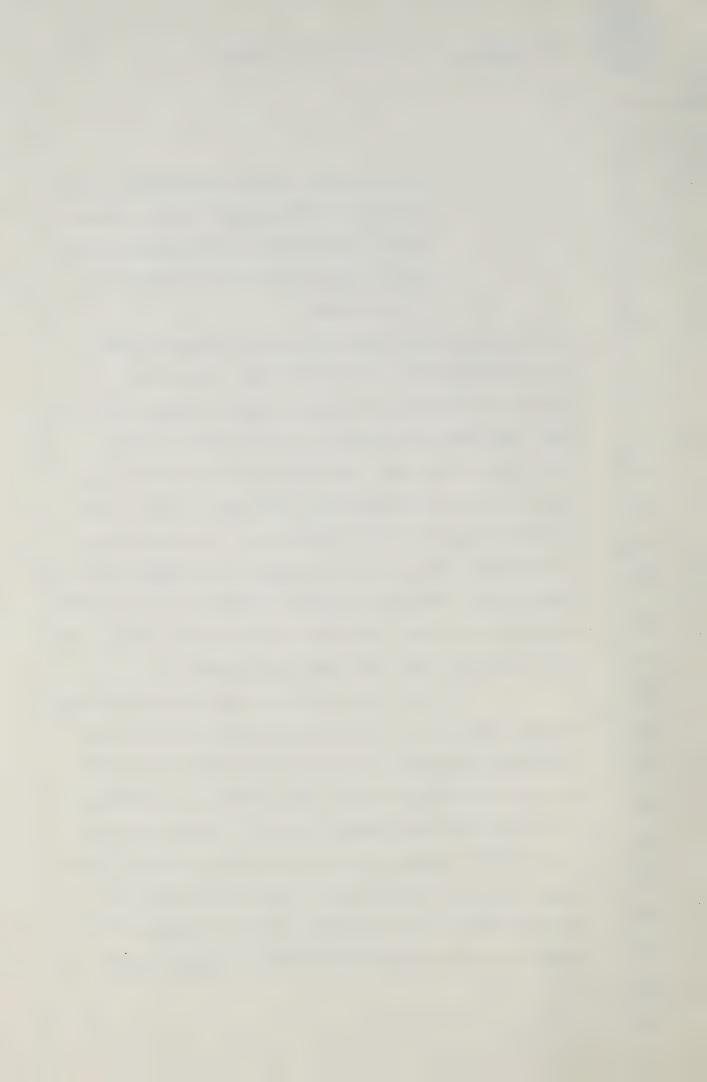




proceedings. Of equal importance, if no change is subsequently laid, a person found responsible by the Commissioner would have no recourse to clear his or her name."

Just pausing there, the Court points out that what ever we lawyers may know about what your legal function is, there is a great danger that the public sees your function here as a trial and no matter how often we may say, and the Attorney General may say, and the Court of Appeal may say that it is not a trial, the fact of the matter is that the public is, unfortunately, not in a position to appreciate the distinction between the Public Inquiries Act and the Judicature Act and they look at you sitting here, sir, as a judge and say, "He must be judging".

Now, the Court of Appeal points to the danger that your determination, if you made one, would be viewed as a legal determination and I think one can go further and say that there is a danger, not just that your determination of a name could do great public damage, but your determination of, as Mr. Lamek says of murder or a killer on the lose, a determination to that extent, could do great public damage and that that determination, as I say, need not



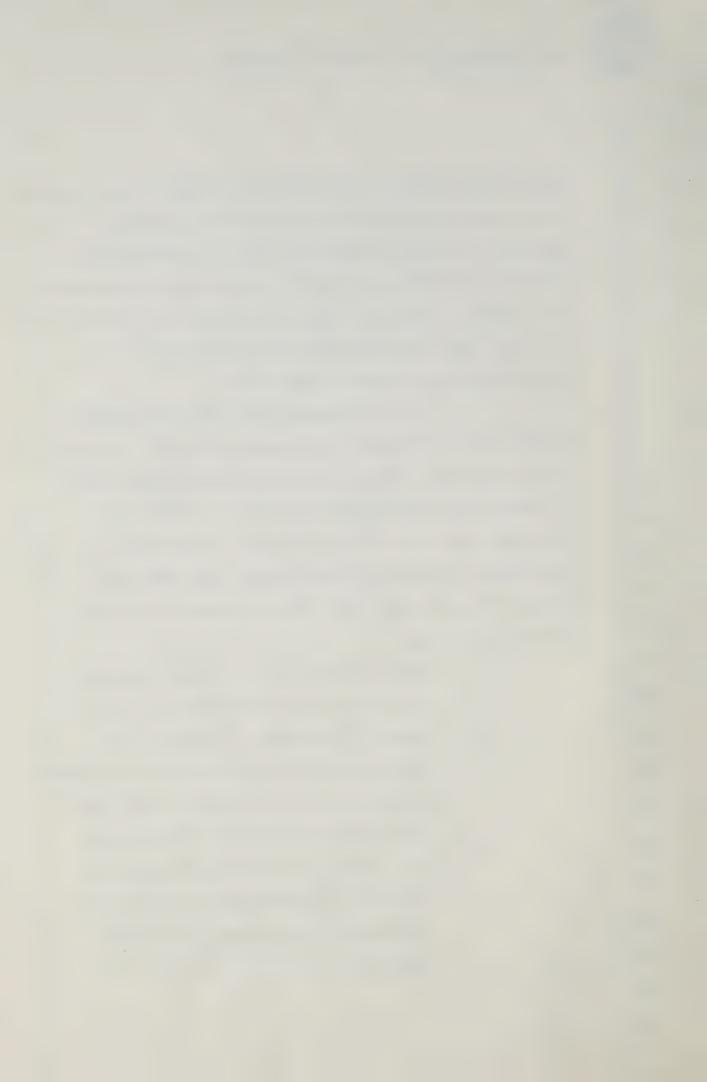


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be made, but clearly ought only to be made in the presence of the most compelling evidence and to publicly speculate or voice a suspicion will, in many ways, amount to a determination and it is just not an exercise with respect, that you ought to engage in if there is not that level of assurance which justifies you in making findings one way or the other.

Then justcarrying on with the decision on page 18, as to what your mandate is, and I am going to put something before you here and say to you that I am not sure that beyond putting it before you I can offer you much assistance, but I would like to read page 18 beginning about eight lines from the bottom. This is what the Court of Appeal says you are obliged to do:

"The Commissioner is obliged to hear all of the evidence relating to the cause of the death of children and this would include evidence which tended to show that one or more of them died as a result of unlawful or negligent acts. While the Commission must not identify an individual as being legally responsible for a death, he should analyse..."





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This is the critical part:

"... he should analyse and report upon all of the evidence with respect to the circumstances of each death and if he can, make recommendations with respect to that evidence."

Now, that presumably has reference to paragraph three of your terms of reference which says that you inquire into, report on and make recommendation.

Now, what does that, "make recommendations" mean, because the Court of Appeal has said that you are to make recommendations.

THE COMMISSIONER: Well, isn't that taken from the terms of reference?

MR. STRATHY: Yes, it is, exactly. It comes from paragraph three of the terms of reference.

THE COMMISSIONER: Yes

MR. STRATHY: Your terms of reference say that you are to inquire into but which the Court of Appeal says you should analyse, report upon, which is what your terms of reference say you are to do, and make recommendations with respect to that evidence. It is the "make recommendations" that I am trying to get at and say, "What does that mean?" Because one



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thing is clear and that is the Court of Appeal has not said that you should determine how a child died or how and by what means a child died. The farthest they go is to say that if you can you are to make recommendations with respect to the evidence concerning the circumstances of each death.

THE COMMISSIONER: Analyse and report on all of the evidence with respect to a certain test of each death, means drawing an inference as to how they died.

MR. STRATHY: I am not sure it goes at all as far as that. It seems to me that what they are saying is that you should, in effect, put before the public in your report, and it necessarily involves an analysis of the evidence, but put that evidence before the public and once that evidence is set out in your report, if you can, make recommendations with respect to that evidence.

Now what I am attempting to get at, and I am not sure I can give you a satisfactory answer, is what are the recommendations you are suppose to make. Is it a recommendation as to how and by what means the child died? I am not sure, sir, it isn't.

THE COMMISSIONER: I thought it would



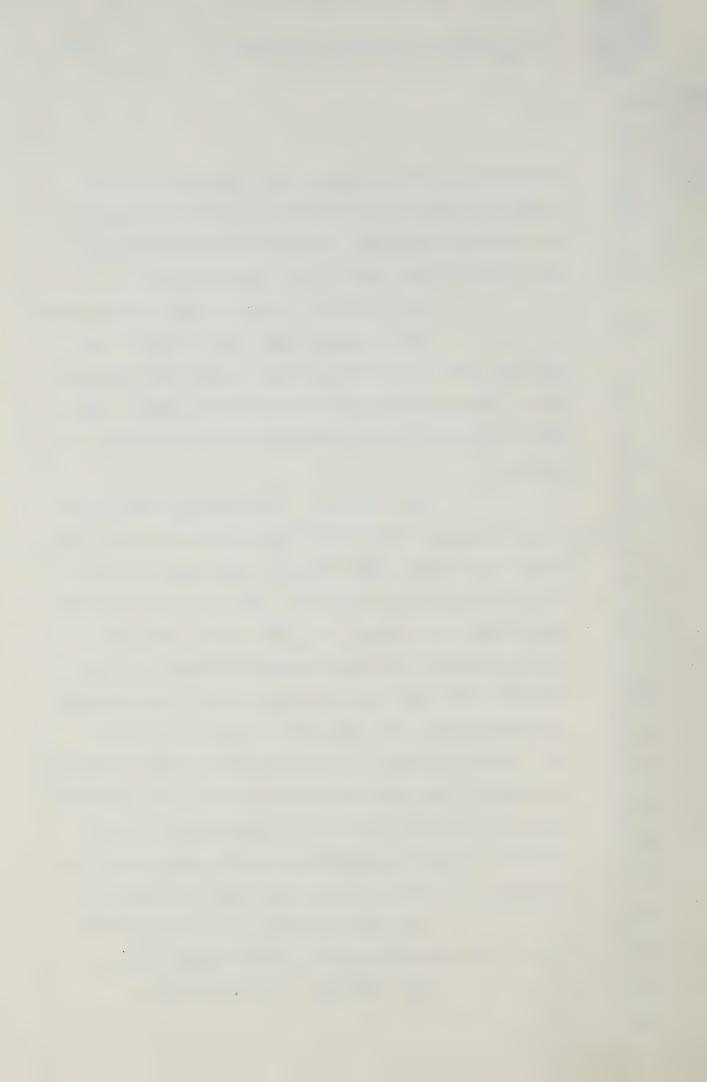
be something like perhaps , yet I am not too sure it was that carefully thought out when it was put in the terms of reference, because the recommendations have already been made by the Dubin Inquiry.

MR. STRATHY: That is exactly the point THE COMMISSIONER: But if there was some way that I could say, that I could add something to it, perhaps this would never happen again. Maybe that is the sort of recommendation I assume they had in mind.

MR. STRATHY: I thought it might have meant that but then you have an injunction not to do the work of the Dubin Commission all over again and not to do the work of Atlanta and not to do the work of the Ministry of Health. It seems to me that the "make recommendations" means something more than that and more than repeating the work of the other bodies and Commissions that have been structured to look into these deaths and that the "make recommendations" in effect, replaces the determinant in the Coroner's Act, that it is not your job to determine, it is your job to make recommendations with respect to the evidence. I know that it is not very satisfactory.

THE COMMISSIONER: You tell me what it is, the recommendations I should make.

MR. STRATHY: I think that is a



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difficult thing. The Court of Appeal is saying that if you can make recommendations. You are not to decide that baby so and so died as a result of a deliberate dose of digoxin, you are suppose to lay out the evidence and if you are able to make recommendations with respect to that. I know that it is not very satisfactory, but it seems to me that the deter mine was left out of your terms of reference for a reason and what you are left with is making recommendations.

The Court of Appeal in apparently at pains to point out that your function is to analyse and report upon and not to determine. I think that is about as far as I can take it except to respectfully adopt, as I have, what Mr. Scott has said about danger of you publically voicing a concern of suspicion, because I think you do your job, with respect, Mr. Commissioner, by simply, in those cases, where you have doubts, you do your job by simply laying out the evidence.

THE COMMISSIONER: It goes against the judicial grain and you have got to accept that.

MR. STRATHY: I know it does and I think that is the big danger that one knows that these inquiries under the Public Inquiries Act, invariably



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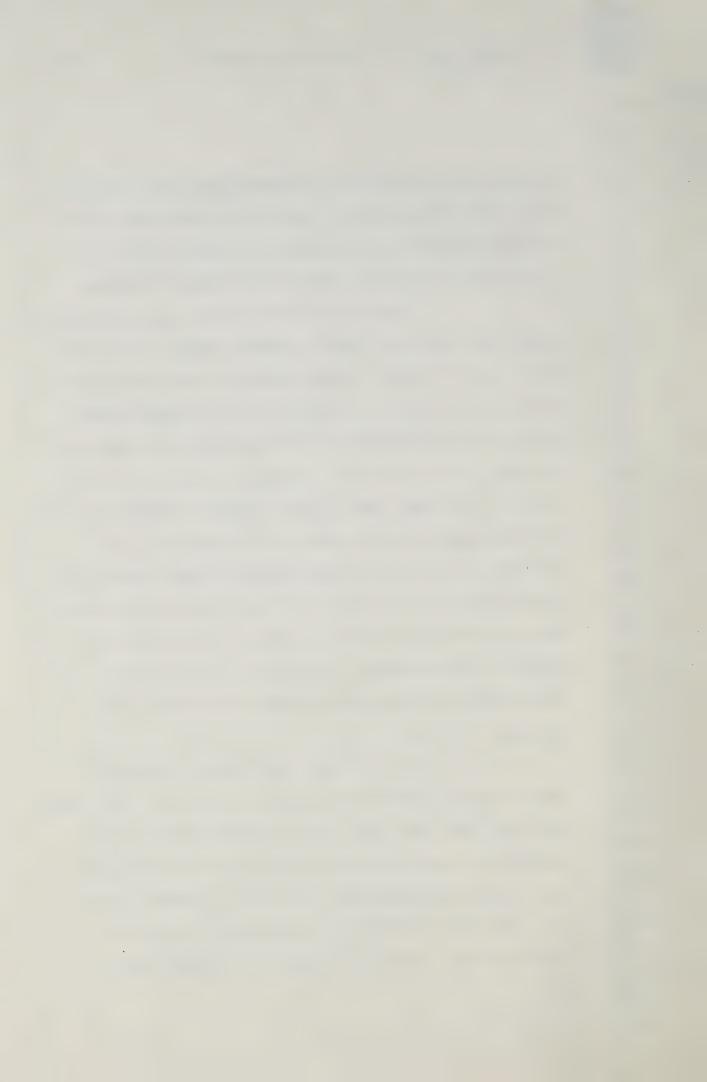
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a judge is appointed as a Commissioner and presumably apart from knowledge of rules and procedures and how evidence should be presented, a judge is used to weighing and sifting evidence and making findings.

There is a great danger in my submission, and I say this with great respect, being a judge you will want to judge, because that is what you do on a day to day basis is judge and in this particular case and in this particular commission, it seems to me that you should avoid judging, as you would in a civil or criminal case, avoid judging, unless you are so compelled by the evidence and unless you are satisfied that the evidence unquestionably points to a certain answer and that you must not, with respect see, in particular cases, saying I am not able to come to a conclusion, you must not see that as a dereliction of your duty or some failure in your mandate.

Now, just one last point really of a legal nature, one other sign post perhaps. Mr. Scott has said that you will want to decide these cases based on a standard of the balance of probabilities but having said that Mr. Scott went somewhat further and said this. This is at Volume 153, page 861. I think I can quote it to you. It is not long.





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Dealing with the issue of standard of proof, he says, and I can't give you the line, because I didn't take it.

"... having regard to the seriousness and importance and impact of your determination, you will want to satisfy yourself that there is a full measure of assurance before you decide..."

"A full measure of assurance" were the words that he used and he pointed out to you that there is ample law in support of the proposition that a full measure of assurance, with a measure of assurance required by the judicial mind, will vary in case to case depending upon the inherent probability of the fact being considered and the gravity of the finding.

THE COMMISSIONER: Hanes and

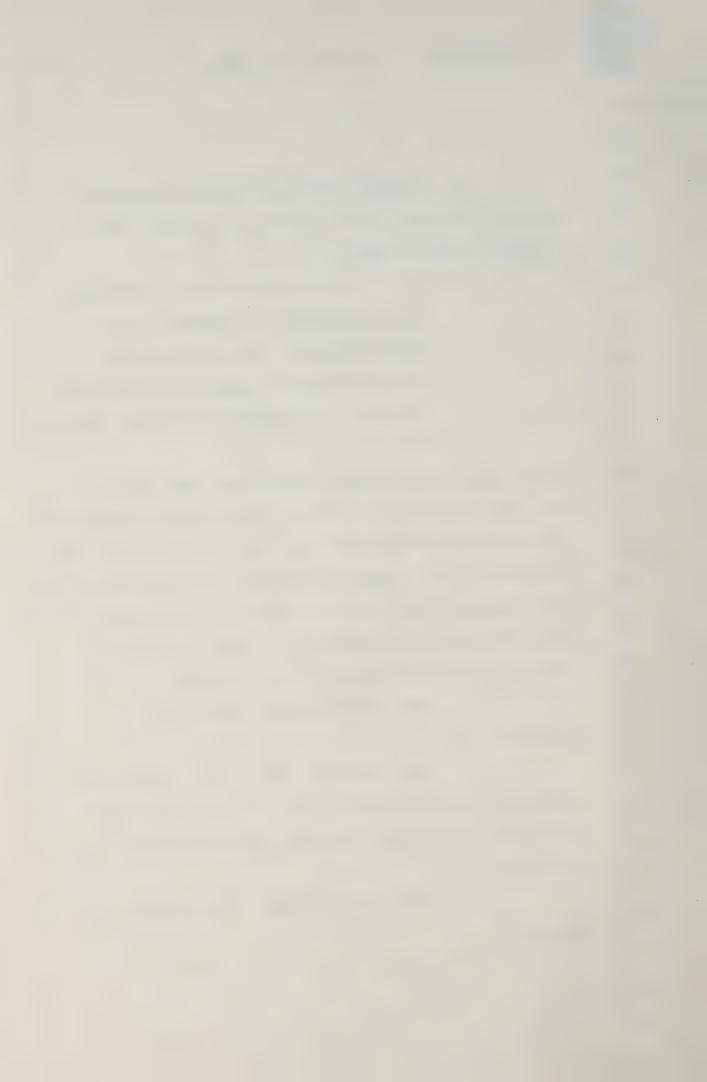
Wawanesa.

Wawanesa.

MR. STRATHY: Among other things, the one that I want to put to you, if I may, was Smith and Smith, which was a decision of the Supreme Court of Canada.

THE COMMISSIONER: So was Hanes and

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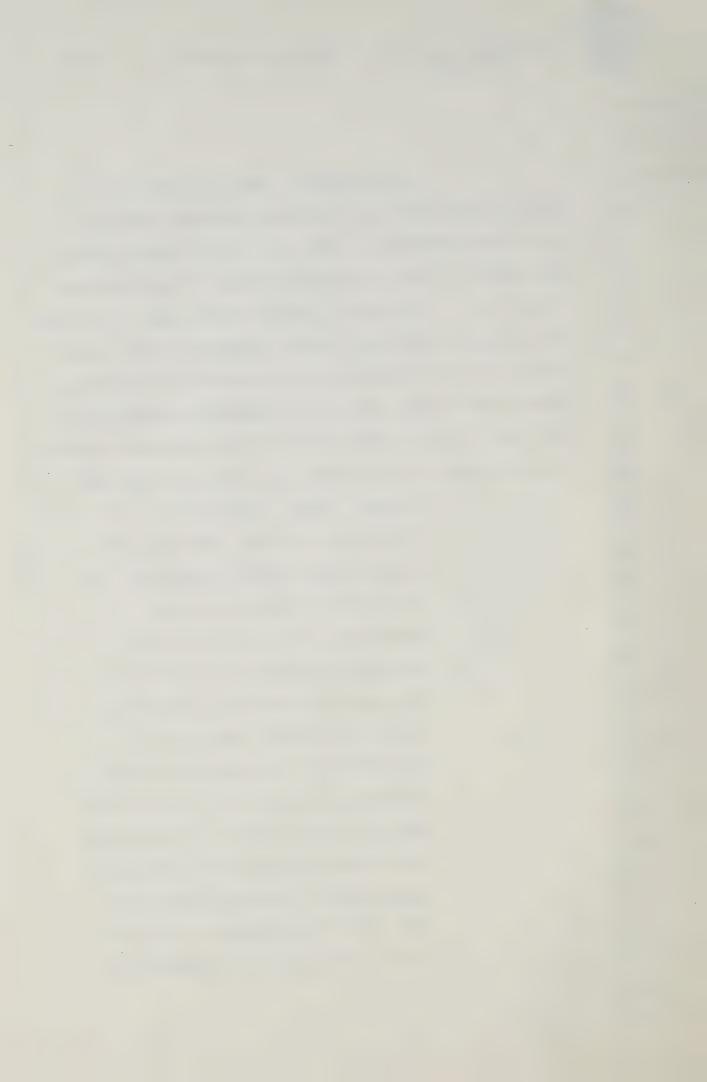


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MR. STRATHY: Well, in fact, I only want to refer you to it for one statement and near the end of the Judgment -- this was a case talking about the burden of proof in adultry cases -- but the Court at page 463 -- it was Mr. Justice Cartwright -- at page 463 adopted a statement from a judgment of Mr. Justice Dixon of the High Court of Australia in Briginshaw versus Briginshaw, which in my respectful submission very aptly sets out the nature of the reasoning process that one ought to go through in a case of this kind.

Justice Dixon said this:

"The truth is that, when the law requires the proof of any fact, the tribunal must feel an actual persuasion of its occurrence or existence before it can be found. It cannot be found as a result of a mere mechanical comparison of probabilities independently of any belief in its reality. No doubt an opinion that a state of facts exists may be held according to indefinite gradations of certainty; and this has led to the attempts to define exactly the certainty required by



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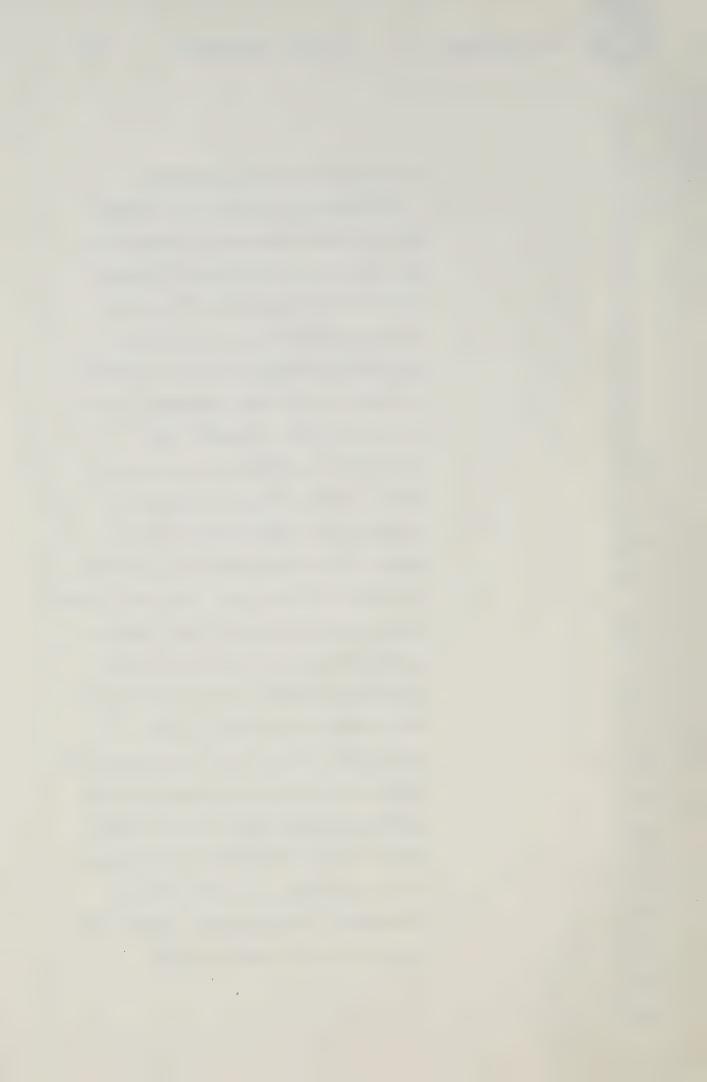
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"the law for various purposes.

Fortunately, however, at commonlaw no third standard of persuasion was definitely developed. Except upon criminal issues to be proved by the prosecution, it is enough that the affirmative of an allegation is made out to the reasonable satisfaction of the tribunal. But reasonable satisfaction is not a state of mind that is attained or established independently of the nature and consequences of the fact or facts to be proved. The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description, or the gravity of the consequences flowing from a particular finding are considerations which must affect the answer to the question whether the issue has been proved to the reasonable satisfaction of the tribunal. In such matters 'reasonable satisfaction' should not be produced by inexact proofs,



"indefinite testimony, or indirect inferences. Everyone must feel that, when, for instance, the issue is on which of two dates an admitted occurrence took place, a satisfactory conclusion may be reached on materials of kind that would not satisfy any sound and prudent judgment if the question was whether some act had been done involving grave moral delinquency."

And that really states what has been said in many cases, including the Hanes and Wawanesa and including, I think, my friend referred to

Bernstein, the notion that the gravity of the finding must necessarily colour one's approach to the evidence and that the grave finding should not be made, as

Justice Dixon said, inexact proof, indefinite testimony or indirect inferences. And in my submission, in this particular case where you are asked to find that intentional administrations of the drug were given to babies at a pediatric hospital — one of the finest — acknowledged to be one of the finest pediatric hospitals in the world — when a serious charge of that nature is being suggested you



would not want to make a finding except on the most compelling and the most certain evidence.

Now, perhaps what I can do,

Mr. Commissioner, is just turn very briefly to the

theory. I would outline the theory that Mr. Lamek

has put before you and that he asks you to accept -
and really Mr. Lamek's theory is the same theory that

has been before the public since late March, 1981 -
and the theory is, really, that during the so-called

epidemic period there was a killer on the loose at

the Sick Children's Hospital. And not simply a killer,

which would be extraordinary in and of itself, not

just a baby killer, but a person, according to

Mr. Lamek, capable of mass infanticide and a person

able to do so undetected over a nine month period, a

person who was killing innocent, sick babies apparently

without no motive or reason.

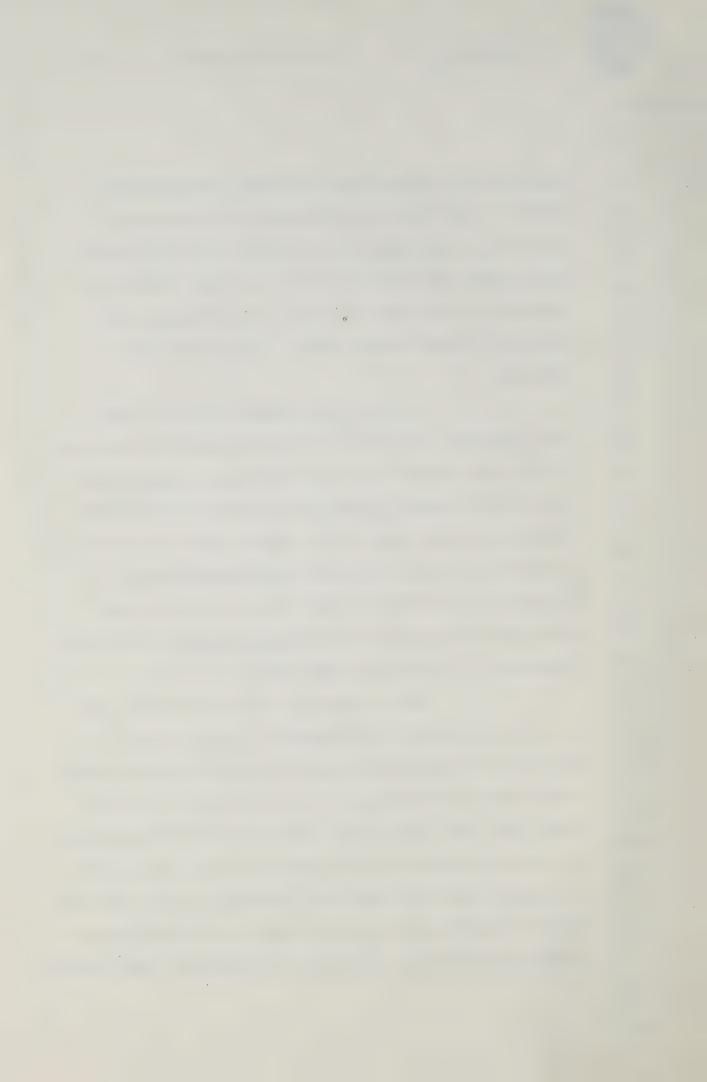
Mr. Commissioner, I ask you to stand back for a moment in light of the Briginshaw-Briginshaw statement that I just read, consider that proposition. It seems on its face quite incomprehensible that here in Toronto, in the Sick Children's Hospital, that some person was intentionally killing babies as Mr. Scott said. It is almost inconceivable that any person, particularly inconceivable to a medical person, that



someone would cause harm to a sick child without motive. The idea is so horrible, so outrageous, so beyond our experience and so tragic that one would expect that the evidence of every other reasonable possibility would be collected, investigated and carefully tested before such a theory would be adopted.

Indeed, Mr. Commissioner, we have that precisely that sort of investigation was carried out in the seventh floor of the Hospital when there was a mini epidemic involving the confusion between epinephrine and vitamin E at which time the Ministry of Health, and the Province, and the Centre for Disease Control were brought in to that floor and were able to unravel the outbreak of poisonings which occurred as a result of that mix up.

Now, suppose in Phase II we may see or hear evidence of the extent of which natural -- or let's say non-murder explanations for these deaths were sought out or pursued, but I suspect -- and I don't say this in any way intended to be disrespectful to those investigating the deaths at the time -- but I suspect that once the Homicide Squad became involved, and once murder charges were laid, no one was pursuing other explanations. No one at the Hospital was pursuing



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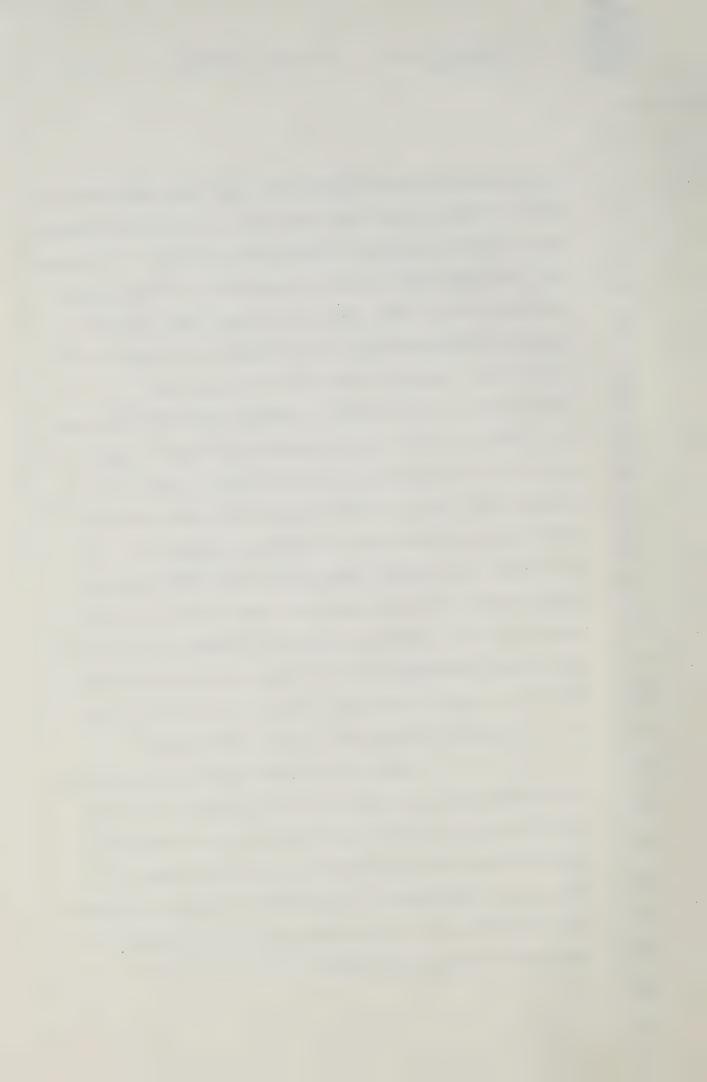
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other explanations because they felt that the Homicide Squad was there and they had a job to do and they must have evidence because charges had been laid. I suggest that the Homicide Squad was unlikely to pursue other explanations or that there was in any way a sort of detailed epidemiological analysis that we saw in the case of the seventh floor and I ask you, Mr. Commissioner, to consider a possibility which few here are likely to put to you because it is not a very satisfying possibility and it is not, in fact, an explanation, but it is the possibility that we may never know, without any satisfactory level of assurance, how and by what means these children met their deaths, not just how many died from unnatural causes, as Mr. Lamek has said, but indeed whether any died from unnatural causes or what those causes were and we may never know that because the trail is cold, the evidence is incomplete, stale, unreliable.

Avenues which might have been explored at the time were not explored and it is now too late. Even if medical science were to put up new explanations in the years to come we may never be able to test those explanations because the evidence is simply gone, the raw data is not available, or, in fact, it may never have been available.



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are known to have occurred.

Mr. Commissioner, Mr. Lamek has asked us to begin your assault on these mysteries by looking at the case of Justin Cook, and I will turn shortly to the case of Cook, but as Mr. Scott has said there is a great danger in Mr. Lamek's approach because if you take that approach and if you go wrong with Cook your approach to all of the other deaths is coloured and you find yourself if you go wrong with Cook, you find yourself on a murder trail which is not there or may not be there. And if you go wrong with Cook, you are likely to compound the error as you go down the list of cases because you are basing your approach on a hypothesis which is fundamentally unsound.

With these preliminary observations as to what, in my respectful submission, your Mandate is and how the evidence ought to be approached, may I outline, sir, where I propose to go in the course of my submissions?

I firstly intend to deal with the evidence with respect to medication errors and to review relatively briefly the evidence in a general way pertaining to medication errors in hospitals, at Sick Children's Hospital in particular, and deal with the specific children where medication errors

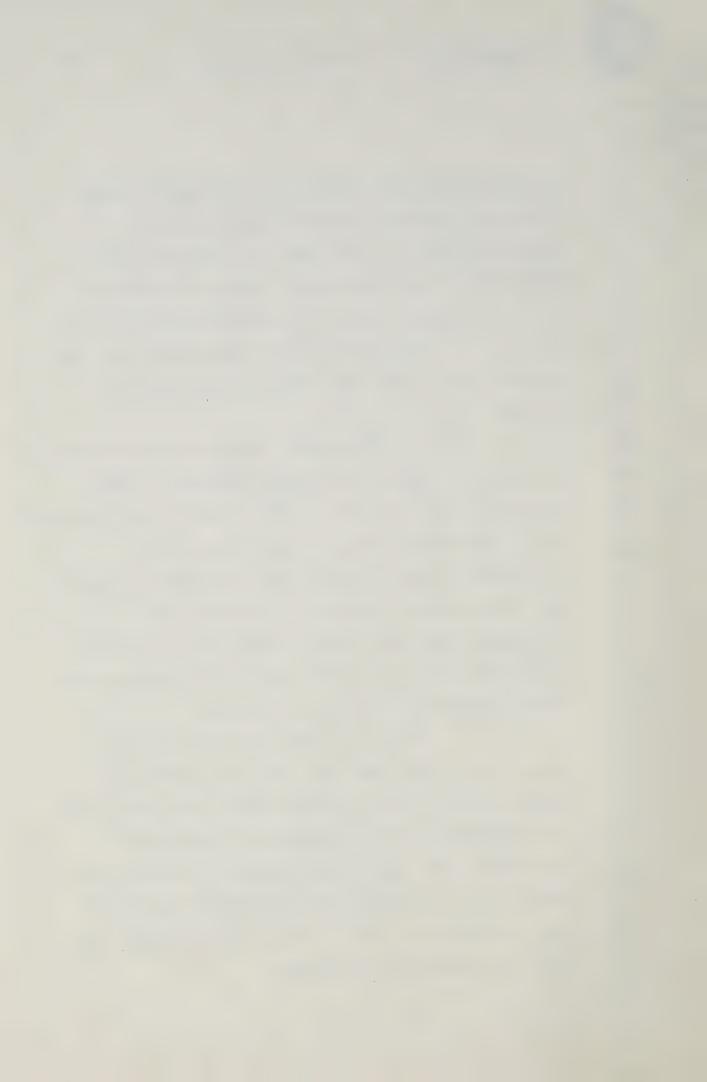


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And then because Mr. Lemek took the case of Justin Cook as an important starting place for you I propose to deal with the case of Justin Cook and to submit to you that medication error in the case of Cook, a medication error at or near the time of his arrest, is a reasonably probable explanation for the digoxin levels which were found in his serum and tissues.

I then propose to deal with the evidence pertaining to some of the other children. I don't propose to deal with all of them or all of the evidence, but in particular I will be dealing with the toxicological and pharmacological evidence (primarily the toxicological evidence), and then lastly I will be dealing with some general submissions concerning toxicology and I will have some written submissions which I propose to file on that topic.

So let me begin with the medication error issue. Mr. Lamek has gone to considerable lengths in the course of the evidence when medication error has been put to a witness as a possible explanation of a particular death, to bring out the reasons why a medication error would be unlikely in the circumstances or why it would not be compatible with the toxicological evidence.

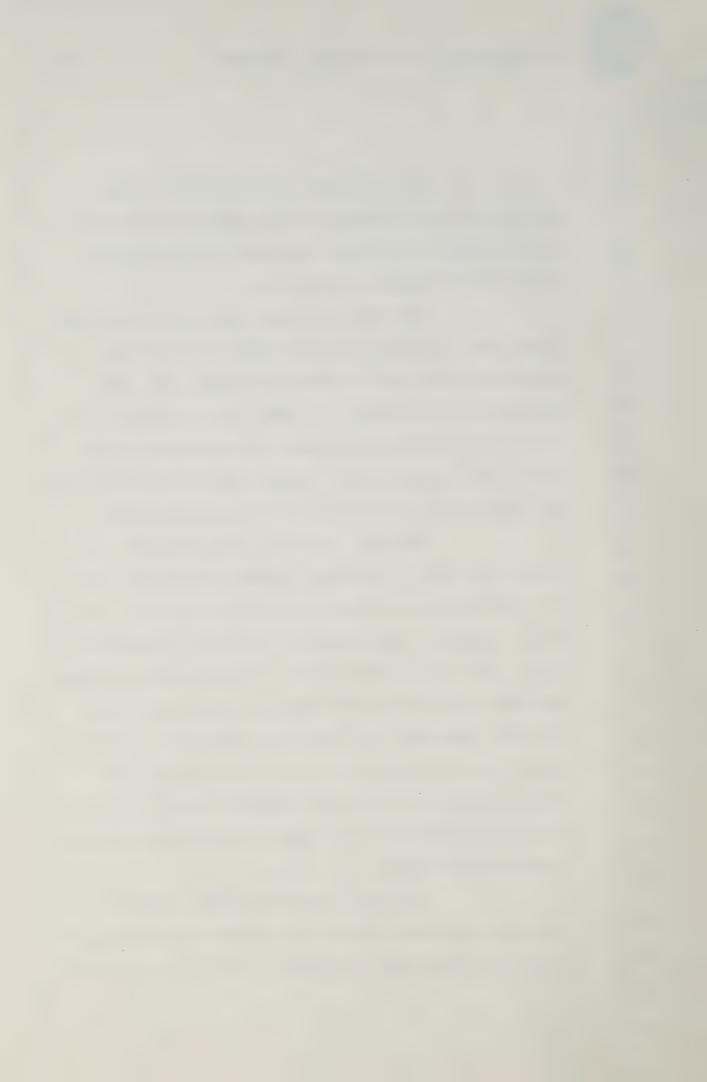


He has also in the course of his submissions with respect to the particular children been at pains to exclude or point to the inherent unliklihood of medication error.

He has on several occasions said that there was no evidence of medication error in a particular case, and I propose to deal with that, although it is difficult to deal with because it is true that on many cases there is no evidence, but that is the nature of the beast that we are not likely to find specific evidence of a medication error.

But Mr. Lamek has also conceded that almost any one of the deaths under review may have been the result of a medication error or that the child's digoxin levels may be explained by medication error. It is an unfortunate fact from the evidence that medication errors do occur in hospitals with alarming frequency, and that the reported or detected errors are only the very tip of the iceberg; the great majority of errors go undetected and it is not surprising therefore that there should not be evidence of medication error.

One might speculate that the error rate would be even higher in an infant ward where the patients are not able to object when the nurse gives

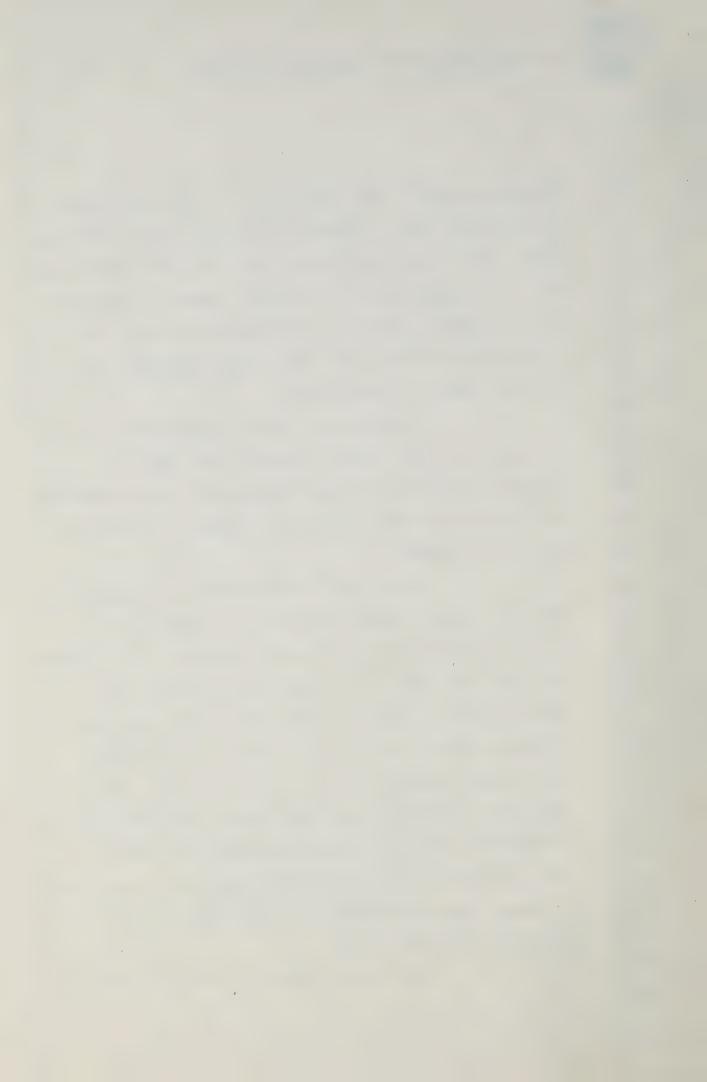


the wrong pill to the wrong baby or the wrong dose to the right baby. Indeed Mr. Justice Dubin commented that - and I won't ask you to pull out the report, sir, but it is page 208 of his report - where he referred to the greater potential for medication errors in a pediatric hospital and the greater potential for harm by reason of such errors.

Presumably a greater potential for harm by reason of such errors because a baby may be I suppose presumed to be more susceptible, more sensitive to a mistake in medication or a mistake in dose than would be an adult.

what the likely error rates are in hospitals not on the unit dose system, and the evidence is of course that the unit dose system was not adopted at the Sick Children's Hospital until after the so-called epidemic period. And just to mention the evidence with regard to error rates - I will not ask you to take out the exhibit, sir, but Exhibit 223, an article in the New York State Journal of Medicine, March, 1981, referred to an error occurring once in every six or seven times medication is given, which would produce a 15% error rate.

That study pointed out one of the ways



to reduce medication errors is to reduce fatigue which precedes or provides a predisposition for the genesis of an error.

Exhibit 222 which was an extract from a text on medication errors referred to error rates in hospitals not using the unit dose system, an error rate ranging from 5% to 20%, and of those - those are simply the reported errors. I am sorry, those are the actual errors. What Dr. Spielberg and others point out was that in fact the reported errors are just a small percentage of the actual errors so that if the rate is 5% to 20% only a fraction of those 5% to 20% would have in fact been reported. Dr. Spielberg in his evidence mentioned that in one study a reporting rate of 1 in 700 errors being reported.

Exhibit 371 which perhaps I could ask you to look at for a moment. It is the report done in the department of pharmacy at the Hospital for Sick Children by Jean Gillespie, July 28th, 1981, on the medication administration system. And that report on the first page under the heading of analysis of medication errors, just on the fourth line it says:

"It is agreed generally that many errors are not detected because the person



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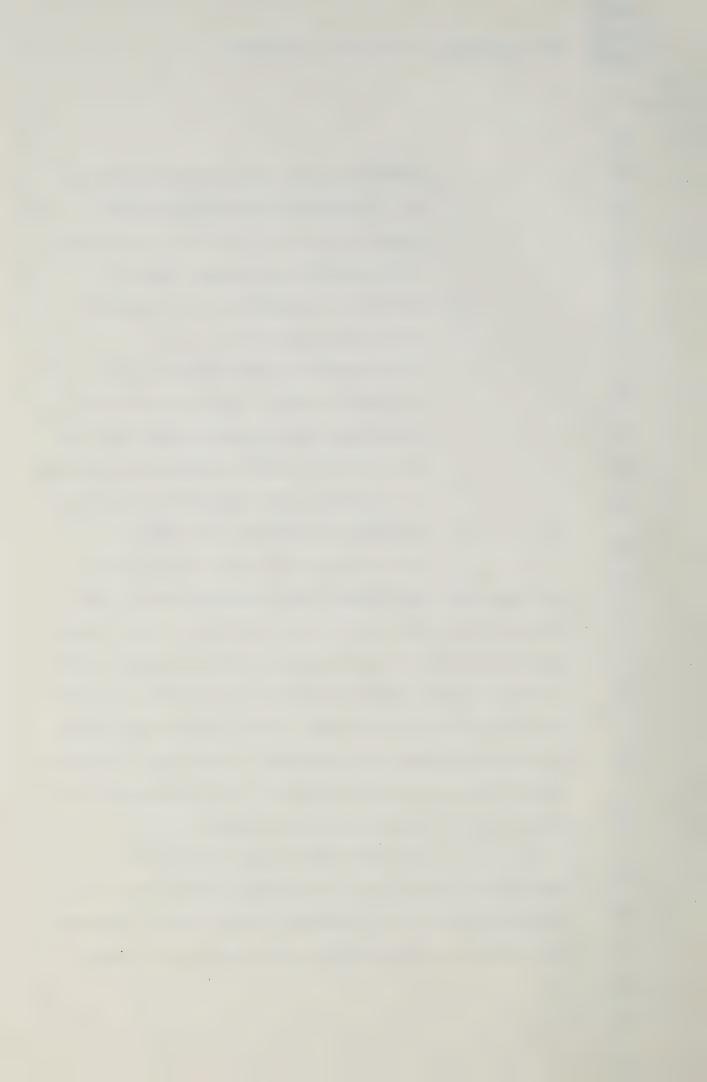
committing the error was not aware of it. The reporting routine at the Hospital was not punitive, but rather a documentation process, so it is assumed that most if not all detected errors are reported.

The number of reported errors is
extremely small. A minimum of 5000
doses are administered every day, and
in the three months reviewed an average
of 18 errors was reported each month.
This is an unrealistic number."

If you have by my calculation, Mr.

Commissioner, 5000 doses being administered at the Hospital each day, and if you have over - over three months you are likely to have a total of almost half a million doses administered in the hospital, to have only 54 errors in that time, which is what they came to over the three month period, to have only 54 errors would give you an error rate of .0001% which, as the report says, is an unrealistic number.

Now the fact of the matter in my submission is that most medication errors are not reported and are not reported for one of two reasons: the first and most probable, the error took place





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without the knowledge of the person who administered the drug, which is precisely why there was an error in the first place; the person made an error not realizing that they were making an error .

I suppose the second possibility is that the person knew they made the error but were too afraid or too embarrassed to report the error. But Dr. Spielberg's evidence was in fact that most hospital staff even when confronted with reliable surveillance studies simply deny that they made the errors.

Now apart from the general statistical evidence about medication errors at other hospitals there is evidence before this Commission of a number of specific medication errors at the Hospital for Sick Children during the epidemic period. Some of these errors actually involving children who are under review - whose deaths are under review in this inquiry - and some of the errors occurring at or very near the time of the child's death.

Given the evidence that is before you with respect to reporting of errors it seemed very likely that there were a great number of medication errors that occurred on Wards 4A and 4B during the epidemic period which were not reported.





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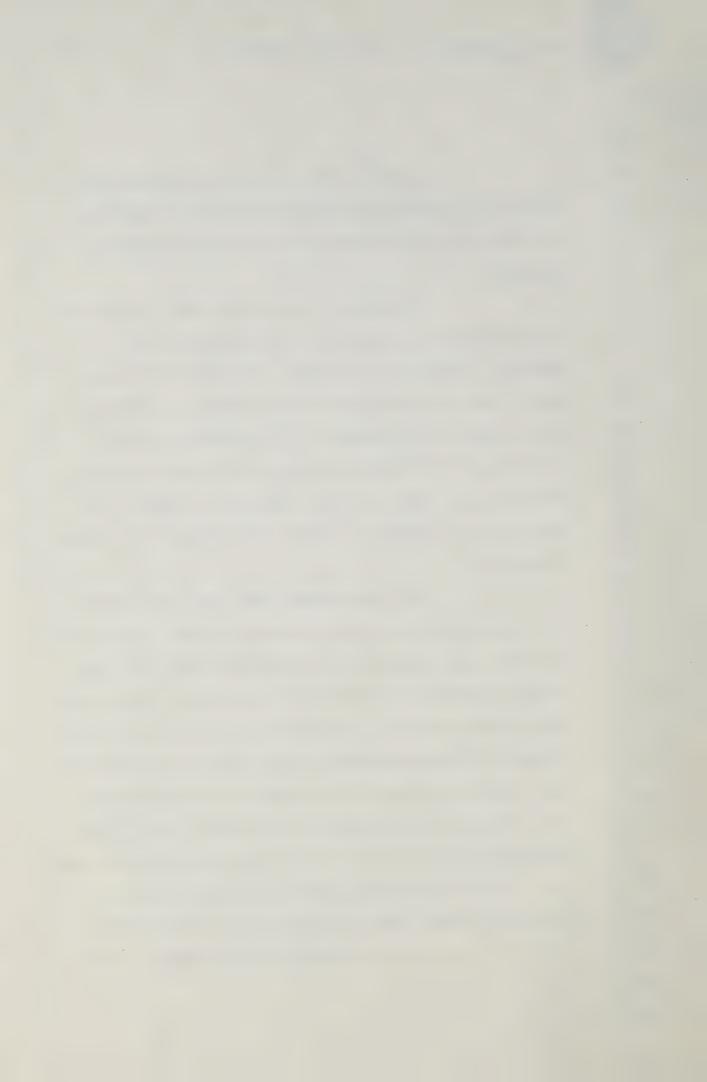
I ask you to refer to Exhibit 366.

This is the summary of medication errors reported on Wards 4A and 4B during the nine month epidemic period.

In point of fact it misses - there are errors as to the errors that occurred on this exhibit. It misses a number. It misses an error that I will be referring to in a moment, concerning Brian Gage on September 24. It misses an error pertaining to Velasquez on August 24 that I will be referring to, and it misses an error on March 12th pertaining to Inwood. 366 is the exhibit. It lists 23 errors.

On the evidence that you have heard,
Mr. Commissioner, and the evidence in the literature
it seems clear that it is an understatement of the
number of errors that actually occurred on the wards
during that period. According to some of the studies
it may be an understatement by as much as representing
only 1% of the actual errors that have occurred but
even if it represents 10% of the actual errors that
eccurred we are looking at 230 errors on Wards 4A and
4B. It it is 1% we are looking at 2000 errors
occurring on 4A and 4B during the epidemic period.

It is interesting for example, that





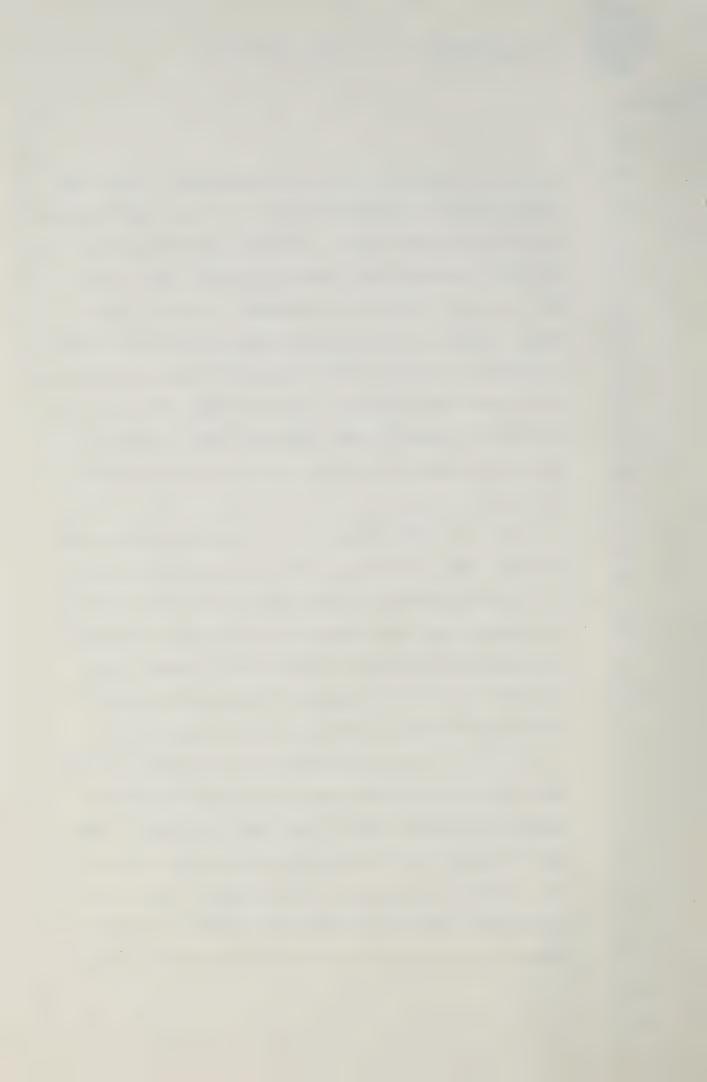
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there are alleged to have been no errors - well, not alleged but no reported errors in January and February, 1981, which seems highly unlikely and unrealistic.

And also interestingly enough on March 28th as has been pointed out by the witnesses, on March 28th, after digoxin is placed under lock and key and after it had been treated as a controlled drug and subjected to certain extraordinary measures there were two medication errors on the same day, both involving doses of digoxin two times as high as they should have been.

The other two interesting points from this are that 12 of the errors reported, 12 of the 23 errors reported on this document were in relation to digoxin, and that perhaps is not surprising when one considers how many of the children on the wards were the victims of congestive heart failure and were therefore being treated with digoxin.

It is my impression from the evidence that digoxin was pretty much as common or usual on Wards 4A and 4B as apple juice was and that it was many, many of the children were given their daily oral doses of digoxin at regular times. And it is perhaps not surprising although a number of these digoxin errors pertain to double doses of digoxin





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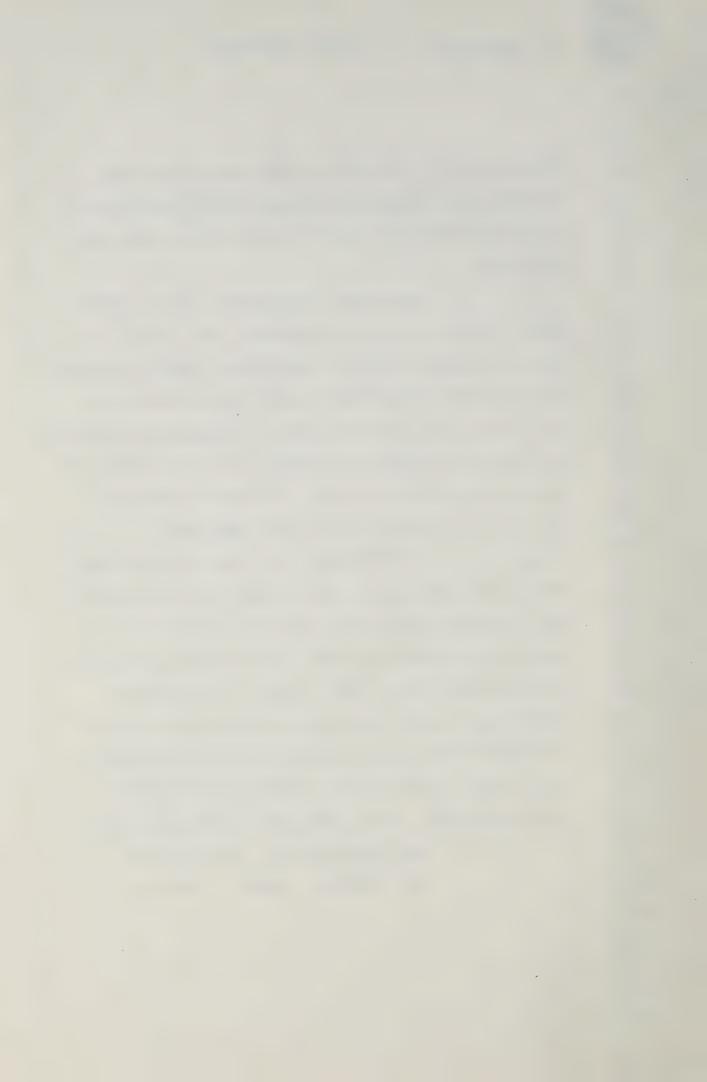
being given, it is highly likely that there were mistakes with respect to digoxin being given to the wrong child and not simply digoxin being given more than once.

The other interesting thing, I don't take a lot of it, but on September 28th, 1980, on Ward 4B someone forgot to administer heparin; failure to administer heparin and I will be commenting on that when I deal with the case of Stephanie Lombardo, but obviously amongst the errors, not just giving it to the wrong baby or giving too much to the right baby but failing to give to the right baby.

Just dealing with some of the errors that we know did occur with respect to babies during the relevant time period, you have first of all the case of Baby Inwood who was the victim of medication error on March 12th, 1981. That is reflected in Exhibit 113 A, and that error occurred the night of the Manojlovich arrest you will recall and Inwood was in error given digoxin which was intended for another patient. And I just can't recall off hand -

THE COMMISSIONER: Kevin Pacsai.

MR. STRATHY: Pacsai. Thank you.



K/RD/ko

It is interesting that on the medication error report, the patient incident report, the notation made by Mary Jean Halpenny says this:

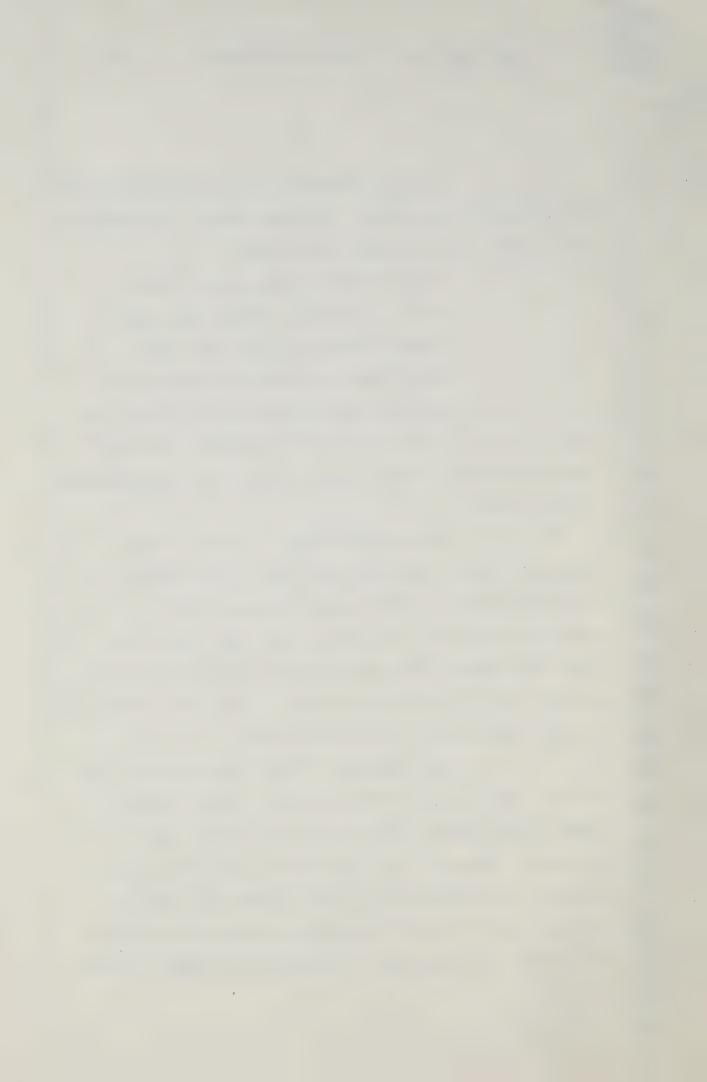
"Team leader asked nurse to give dig. to patient. Wrong name used. Proper identification not used.

High stress and ward extremely busy."

We have heard evidence that medication errors are more prone to occur, and I think it is a matter of common sense that they are more prone to occur in circumstances of high stress.

stressful night. That was the night of the Manojlovich and Pacsai, but if these errors occurred they, generally speaking, occurred at the same time, the times the doctors have indicated the doses were given, and the time in the early morning. Until the arrest of a child there wasn't any great stress.

MR. STRATHY: I am going to deal with this in two stages of the evidence. There are two types of medication error that I submit you must consider. There is the type where a baby was not on digoxin, is inadvertently given digoxin and that, in my submission, may not necessarily happen in the time of stress. It may happen that simply a nurse is going



around with the oral digoxin, giving it to patients in the morning or in the evening and in error gives baby X's digoxin to baby Y. We have seen that and that has happened and I will be referring to that. That is something, given the frequency that digoxin was used, that is something that one might easily see happening on the wards and, in fact, did happen.

The other type of error, which I will be putting to you, particularly in the case of Cook, is the error in the time of tension, in the time of stress where at or in the course of the arrest the wrong drug is given. I was simply using Inwood to point out that in this particular case in a circumstance of high stress and the ward being extremely busy an error occurred.

The next case is the case of Brian

Gage, also another epidemic period baby and one who

got a second dose of digoxin in error. That is

reflected on Exhibit 308. Interestingly enough that

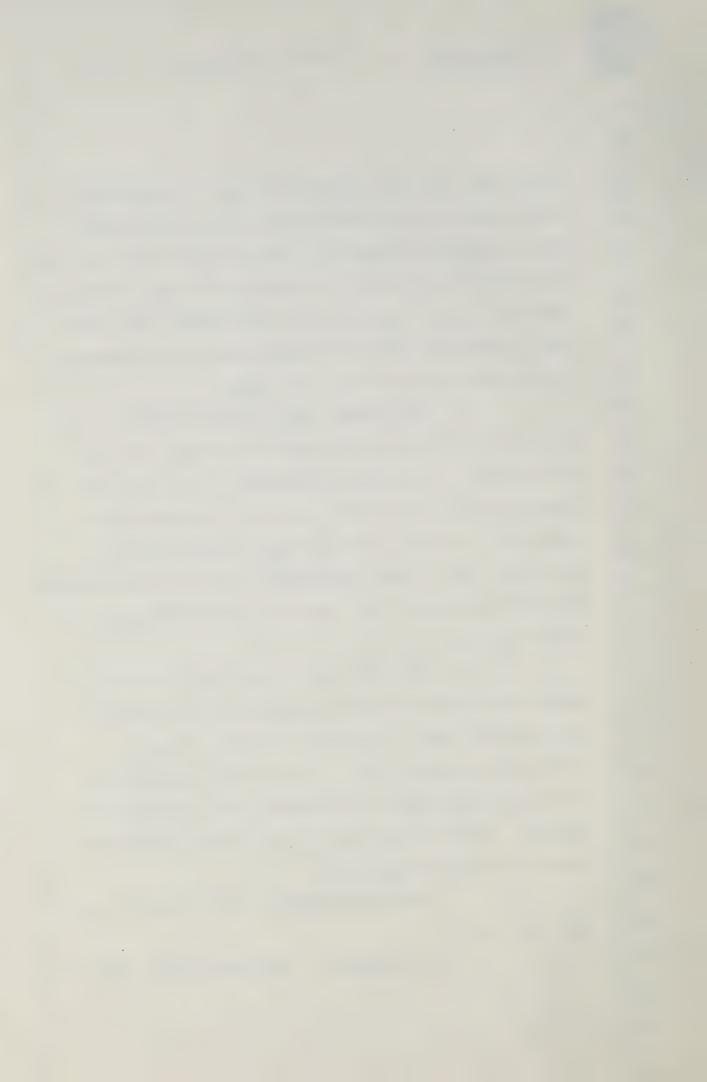
occurred on the 24th of September, 1980, the day before

he died. I don't say there is any causal relationship

between the medication error.

THE COMMISSIONER: What date did you say that was?

MR. STRATHY: The date is the 24th of



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September. Did I say August?

THE COMMISSIONER: I think you said

December. All right, thank you.

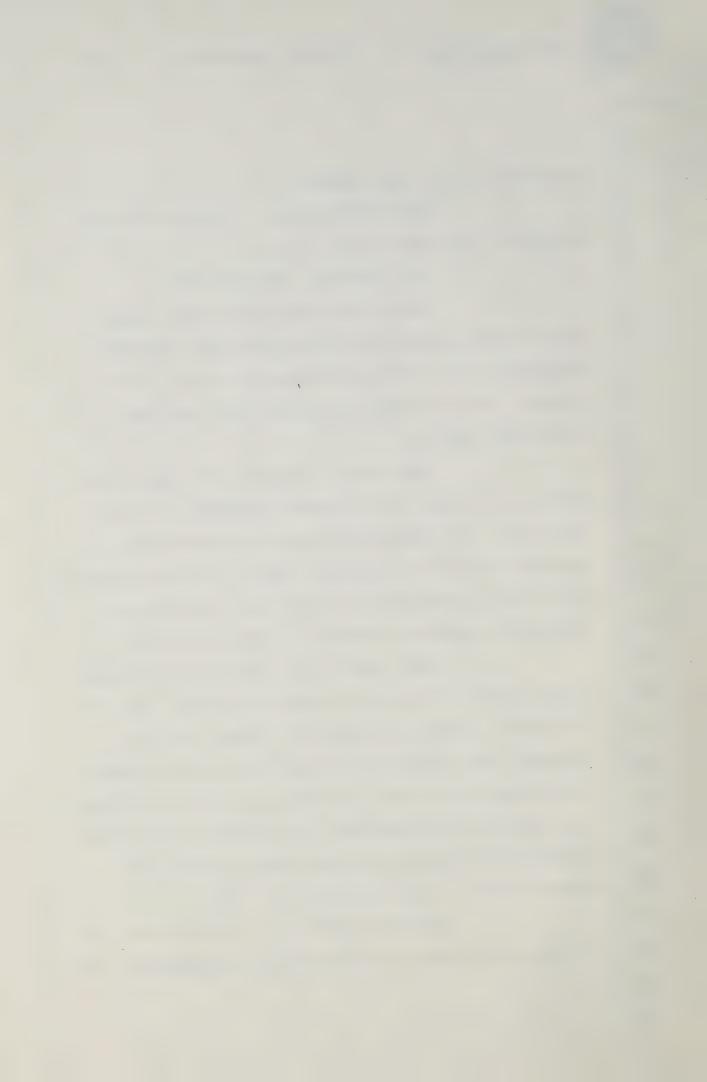
MR. STRATHY: Exhibit 308.

Exhibit 364 relates to Paul Murphy, again another patient who died during the epidemic period and who received on August 19, 1980, a dose of digoxin, twice as large as the one that had been prescribed for him.

Then lastly, Exhibit 363. Not quite lastly, but Exhibit 365, Laurette Heyworth on August 28th, 1980, was prescribed Lasix intravenous and the nurse put it into the buretrol with IV solution instead of as it was intended by IV push and the error was discovered fortunately before it began to infuse.

Then, lastly, in the case of Velasquez we don't seem to have an incident report for him. If we do have I have overlooked it. In the case of Valesquez, the night of his death, as we have already heard, August 24, 1980, the child received, as a result of a doctor's miscalculation, two times as much of the drug as he should have received and that two times happened twice.

Another example, Mr. Commissioner, of an error being made in a situation of high tension and



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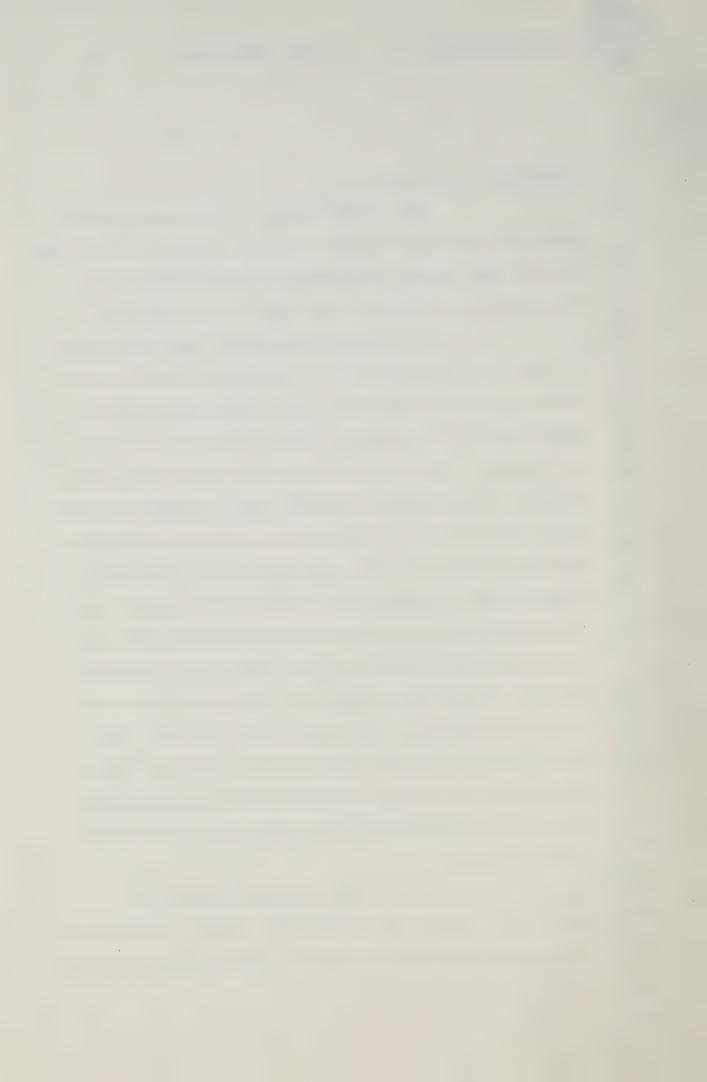
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excitement and stress.

Now, with respect to the deaths under review we have five of the children, five of the 36 under review where there are documented medication errors having occurred during their stay in the hospital.

Mr. Lamek pointed out that the evidence is that the great majority of medication errors do not have harmful consequences and I think that is a fair reflection of the evidence, that even though a child, for example, may not be on digoxin, to give the child digoxin is not likely to do the child noticeable harm, particularly if it is simply a normal oral maintenance dose of digoxin, but the significance of that, with respect to my submissions, is that that a normal oral maintenance dose of digoxin may account for the child having digoxin in his blood, or particularly tissue, in these cases, may account for those findings in a case of a child not being prescribed digoxin. That is not to say that the dose did the child any harm, simply that an inadvertent dose explains the levels that were recorded and I will deal with that evidence in due course.

Even though the vast majority of medication errors may well have no harmful consequences, it is clear that some medication errors do and can have



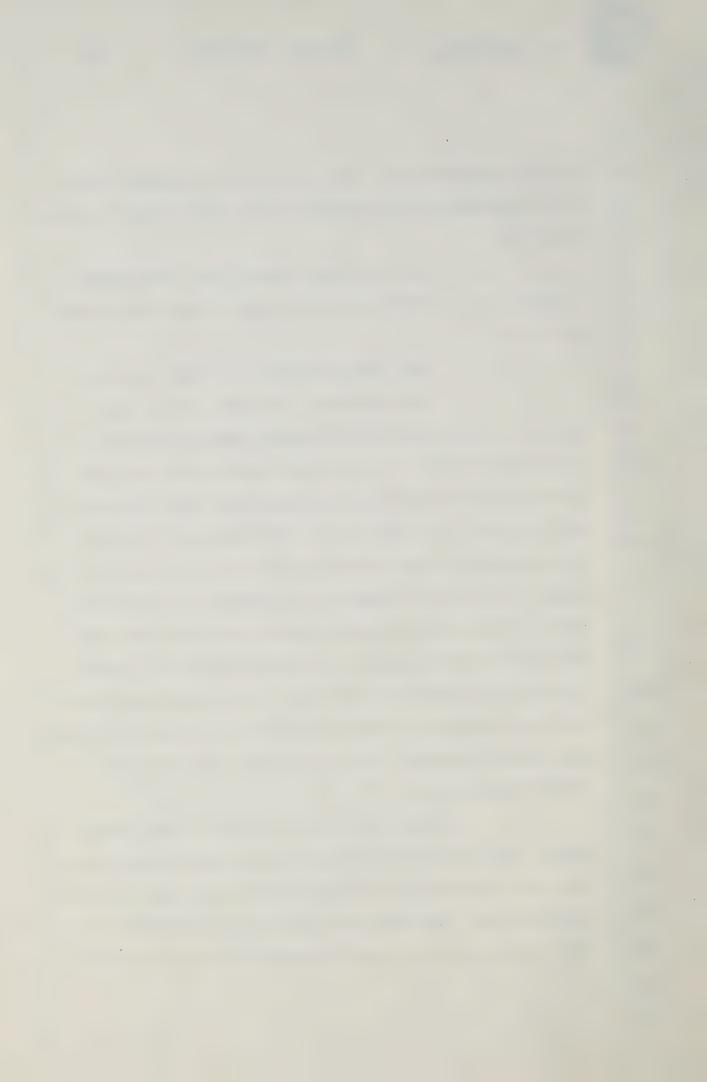
harmful consequences, particularly the evidence before this Commission, with respect to the Baby Murphy on the 7th floor.

Now, in that regard, Mr. Commissioner, I am not sure if you have your copy of the Dubin Report with you.

THE COMMISSIONER: I think so, yes.

MR. STRATHY: At page 177 is the chapter dealing with Baby Jonathan Murphy, and what, in my submission, is instructive about the case, the unfortunate case of Jonathan Murphy and the errors on the 7th floor, is that it is a demonstrated incident of a cluster of medication errors occurring with a number of different babies in a number of different rooms, in the same hospital, where the same error was made by different people, different nurses and where, in the first instance, there was no apparent explanation for the conditions being observed in the children, where the initial reaction was a suspicious outbreak of infectious disease.

Here you have a cluster of very sick babies, one of them becoming so sick that he eventually died and apparently no explanation at the time for what was going on. What was eventually done and what was very shortly done is that on January 23 the ward was



closed, the patients transferred to Ward 5A. On January 25 Baby Murphy died. On January 26th, to ensure that every avenue was explored, a team of investigators from the Center for Disease Control in Atlanta, Georgia, joined the investigation. The Center for Disease Control investigations began on January 28, 1982 and continued until it was indicated that a medication error was the cause of the illness of these patients.

It is interesting that in this particular case of the 7th floor that by bringing a team of trained epidemiological investigators into the floor and by them getting there when the evidence was fresh, they were able to locate the source of the error, namely the confusion of racemic epinephrine with vitamin E.

Looking at that case from a distance one may say how on earth could that happen that you would have this repeated errors at the Sick Children's Hospital, where the nurse is by order and by duty instructed to read the bottle before she administers the drug? How could it happen that three different nurses on this floor, on five separate occasions, or perhaps more than five separate occasions, we don't know, administered the wrong drug to the wrong baby? What is even more interesting is that, I think there is evidence on this, if it is not before you it was



before Mr. Justice Dubin, that these two medications looked very different. Vitamin E is apparently a serum, so when you pour it into the spoon it has all the characteristics of a stickly, slow moving serum.

THE COMMISSIONER: I am sorry, the way I read it they were almost indistinguishable.

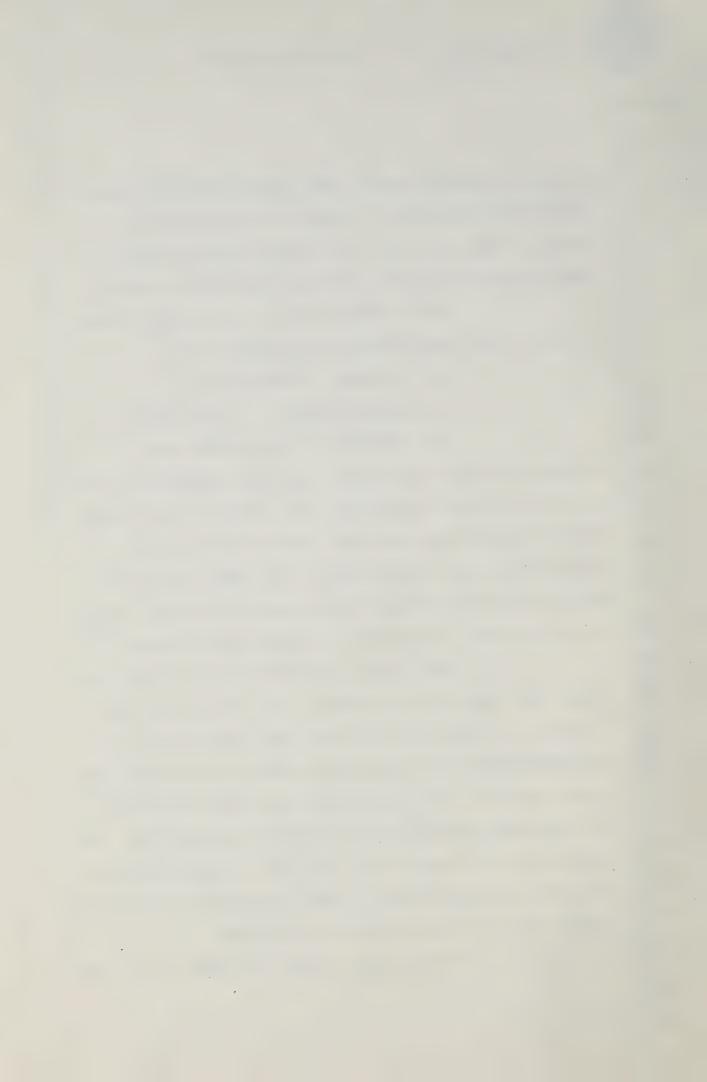
MR. STRATHY: The bottles.

THE COMMISSIONER: I see, yes.

MR. STRATHY: The bottles were apparently indistinguishable, but the thing once poured or in the process of pouring, the vitamin E is a slow pouring syrupy type solution, whereas the racemic epinephrine, as I understand it, is used in inhalers, and you put the epinephrine or adrenalin in an inhaler and it is used to, supposed to clear the passages.

The racemic epinephrine is a fluid much more, much less stickly, gooey, slow moving than the vitamin E, so the error becomes even more difficult to understand when you realize the nurse pouring the stuff in the spoon -- let's assume she has made the error, not checking the bottle, but surely on pouring into the spoon she would notice that what she is pouring is not the sticky, syrup vitamin E, but something else that is fast moving and slops around in the spoon.

So one might have said, well, it is hard

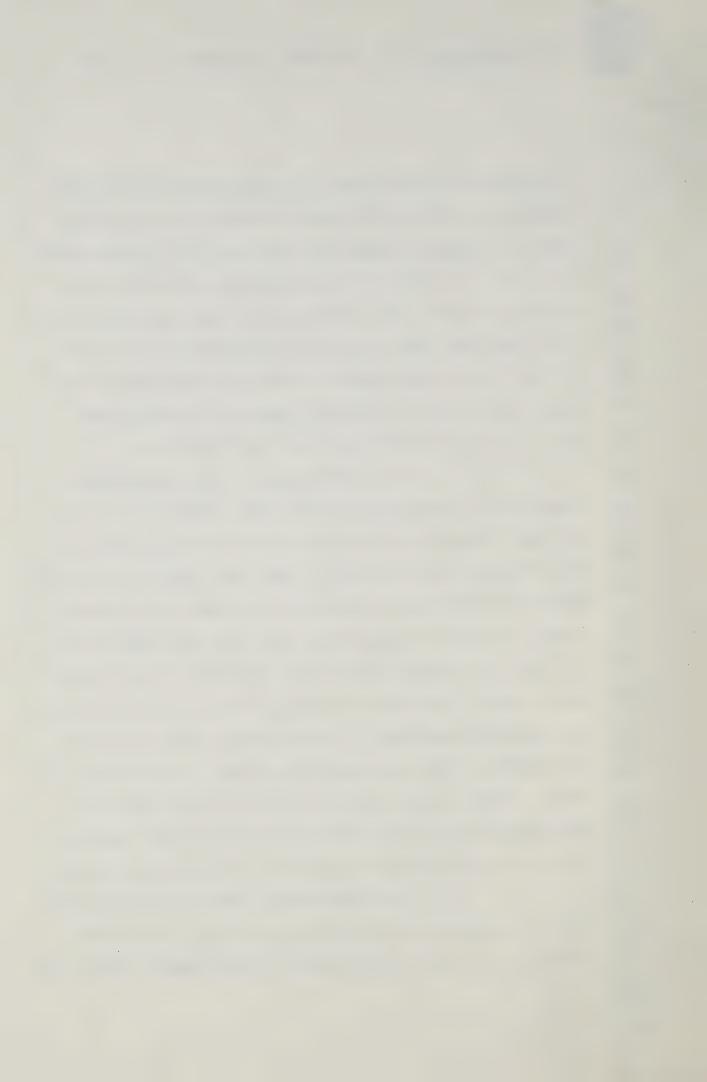


to imagine that this sort of repeated error could have occurred in the Sick Children's Hospital to the extent that five babies became very seriously ill and one died.

What is interesting is that the puzzle was only solved, only finally solved when the CDC got in there and were able to find the offending bottle and, in fact, find that somehow a bottle of epinephrine had been placed where it was not supposed to be and was being repeatedly confused with the vitamin E.

aspect about medication errors, Mr. Commissioner. That is that medication errors are likely to occur when you don't expect them to occur. They are likely to occur when you reach into the cabinet for the bottle of vitamin E, where you know it has always been, and you simply grab it out, as a matter of routine, because it has always been there. The nurse doesn't reak the label, because she becomes complacent, understandably complacent in not checking the label when the bottle is in the spot where it has always been. Once you get the bottle of epinephrine where the bottle of vitamin E was supposed to be it is not that difficult to see errors occurring.

In my submission, when you come to look at the proposition that I will put to you in the case of Cook, and that is essentially that digoxin got on to



the crash carts in Wards 4A and 4B, I ask you to consider, I realize it is something that standing back and saying, well, it is not supposed to be on the crash carts, but in my submission, we have an example on the 7th floor of something being where it was not supposed to be and resulting in very unfortunate consequences.

What Mr. Justice Dubin said at page 179 was in the second paragraph:

"Although the similarities of the bottles of epinephrine and vitamin E afford some explanation of the medication error, it is apparent that the nurse did not comply with the basic instruction which requires a careful reading of the label of each bottle of medicine three times before administration."

I don't know whether the nurse is supposed to read it three times or I think the nurse is supposed to read it, show it to somebody else and somebody else is supposed to read it and the nurse is supposed to check it again.

Mr. Justice Dubin says:

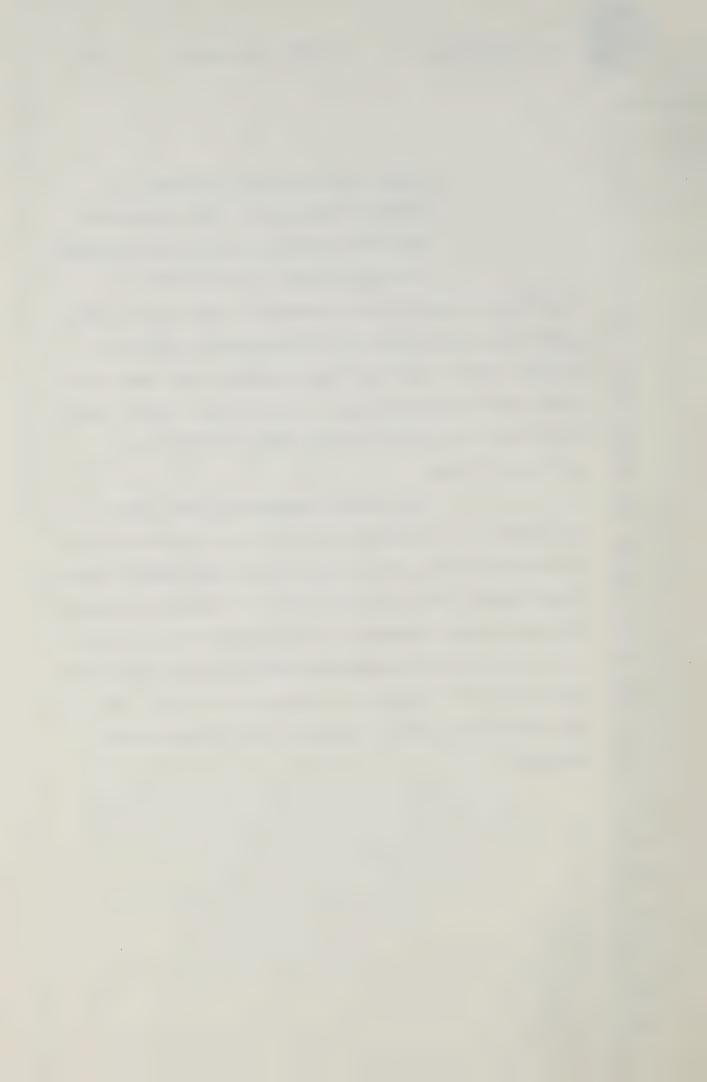
"Furthermore, having regard to the similarity of the labelling, the necessity for the Hospital to over-



"label such bottles in future is clearly indicated. There was also no ready explanation for the presence of epinephrine in the ward."

I ask you to keep those comments in mind when I deal with the case of Cook and the possibility that a digoxin ampule may have been confused with some other ampule and also there may, in many cases, be no ready explanation why a particular drug is found in a particular place.

The other interesting thing about the 7F incident or incidents is that in the course of the investigation the levels were found, apparently digoxin levels were found in some babies not prescribed digoxin. That may be and probably is attributable to substance X, but the other interesting thing is that a detection of an error in relation to digoxin or a child, who is not supposed to receive digoxin, was administered digoxin.



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Mr.Justice Dubin made reference to that at the bottom of page 178 where he says, just five lines up from the bottom:

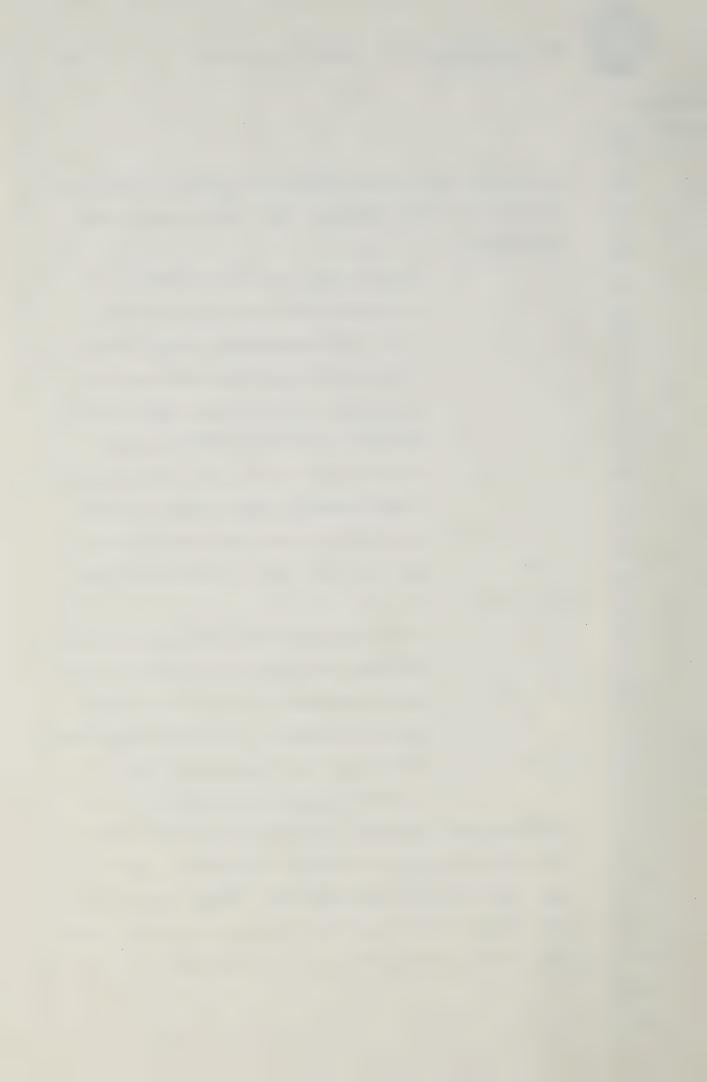
"One of the tests of the babies not on digoxin one disclosed a level of 1.3. This medication had no adverse effect on the patient but was as a result of a medication error on the part of a nurse who administered a digoxin dose to one patient mistaking that patient to be the patient for whom digoxin had been prescribed."

And then the third paragraph of page

179:

"The investigation also disclosed that at least one medication error in the administration of digoxin not with-standing that at this stage it had been designated as a controlled drug."

I think there, with respect, he is talking about the same error he was talking about at the preceding page but it is interesting, again, that this happened once digoxin - after digoxin had been made a controlled drug and was subject to all of the special precautions we have heard about.



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I ask you, sir, to keep those observations or that incident in mind when I put my submissions to you with respect to Babies Lombardo, Belanger and Hines.

Now, the other aspect of the evidence relating to medication errors which I would like to put before you again, just, perhaps, in a summary way, is the evidence that you have with respect to known errors with respect to digoxin in other hospitals; that is, known errors causing death caused by digoxin. And, firstly, Exhibit 276B was an article in the Journal of the Forensic Science Society, 1974, and that article, on the second page of it -- cases three and four and five -- were all babies all being administered doses of digoxin in error, the first two dealt with children on tablets of digoxin but case five refers to an eleven week old baby in hospital that was prescribed with .05 milligrams of digoxin intravenously every four hours. Immediately after the fourth dose had been administered the nurse concerned realized that this had been a 10 fold overdose. The baby died eight hours later. Subsequently, 31 nanograms per millilitre of digoxin was found in the post mortem blood.

And then a similar error at page --



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just over the page -- case eleven -- a two month old baby in hospital was prescribed the digoxin intravenously but that the prescription stated .8 milligram doses instead of the intended .08 milligrams, presumably the doctor's error in that case. An hour after the first dose the child was seen to be in distress and died six hours after injection. .3 nanograms per millilitre of digoxin were found in the post mortem blood.

And then Exhibit 276A, Mr. Commissioner, describes a similar circumstance -- and just if you could look at the abstract on the front page -- very front page in the smaller print at the top, about midway down, it talks about the second case being reviewed . In that article, case two, a child eleven days old because of congenital heart disease was treated with digoxin. One and a half to one hour before death the child was given .7 milligrams digoxin intravenously . A quantitative determination of digoxin was performed with xanthydrol in the liver, heart and lung , and by the floral metric method in the liver, heart, kidney, urine and blood. So, again, another example of a child in a hospital being administered intravenously in error an excessive dose of digoxin and death resulting.





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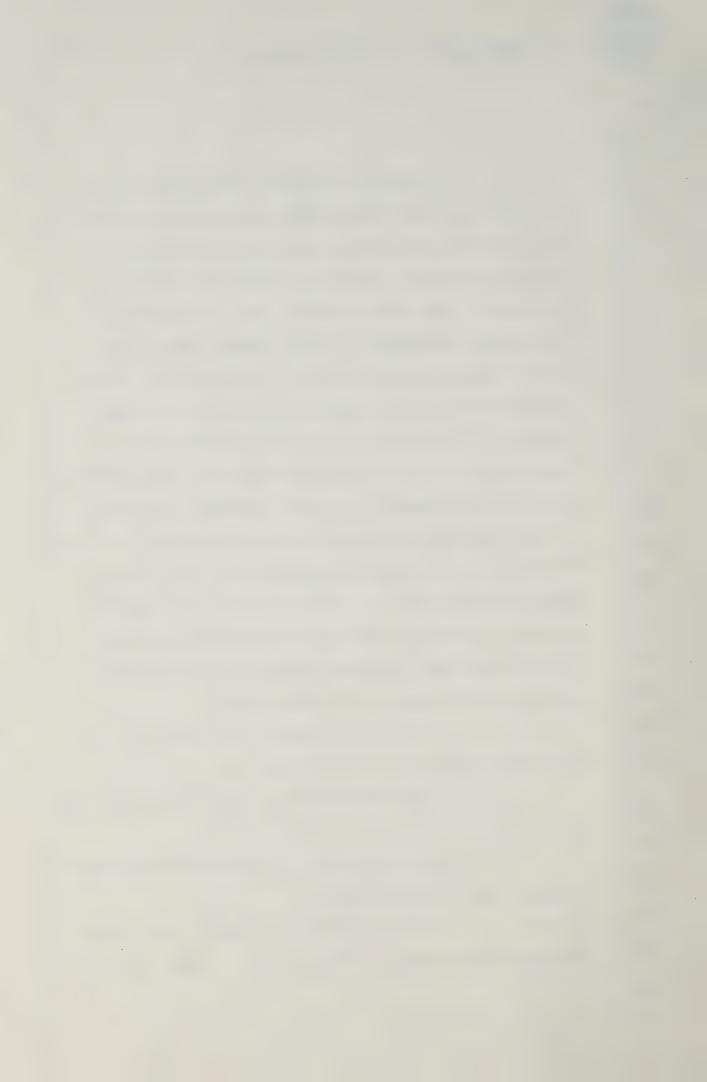
I am not going to refer you to the specifics but there is further references in Exhibit 276C and 276D with respect to specific cases of children dying as a result of inadvertent digoxin overdoses. And, what I submit, Mr. Commissioner, is that digoxin medication errors causing death are a known phenomenon, they happen in hospitals, they are documented in the literature and when it comes time for you to assess the inherent probability or improbability of this scenario that Mr. Lamek paints for you as opposed to the other scenarios which may be available, my submission to you is one of the things that must colour your approach is the fact that we know that these sort of errors happen in hospitals. We have documented cases of them happening in the Hospital for Sick Children and we have documented cases of them happening causing death.

Mr. Commissioner, I am about to turn to another area in my submissions...

THE COMMISSIONER: Well, would you like to --

MR. STRATHY: ...it would be convenient to pick up at 2:00 o'clock?

THE COMMISSIONER: There is no reason why we can't do it at 2:00 o'clock. I was intending





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to	know	know this		is	s fine.		We	wil	l break	off	now.
		- 1									
How	long	g do	you	thi	nk	you	wil	.1 be	e?		

MR. STRATHY: I would like to finish this afternoon and I think if we start at 2:00 I will finish this afternoon.

THE COMMISSIONER: All right then.

We will come back at 2:00, then.

--- Lunch break.

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JR/hr

---On resuming

THE COMMISSIONER: Yes, Mr. Strathy.

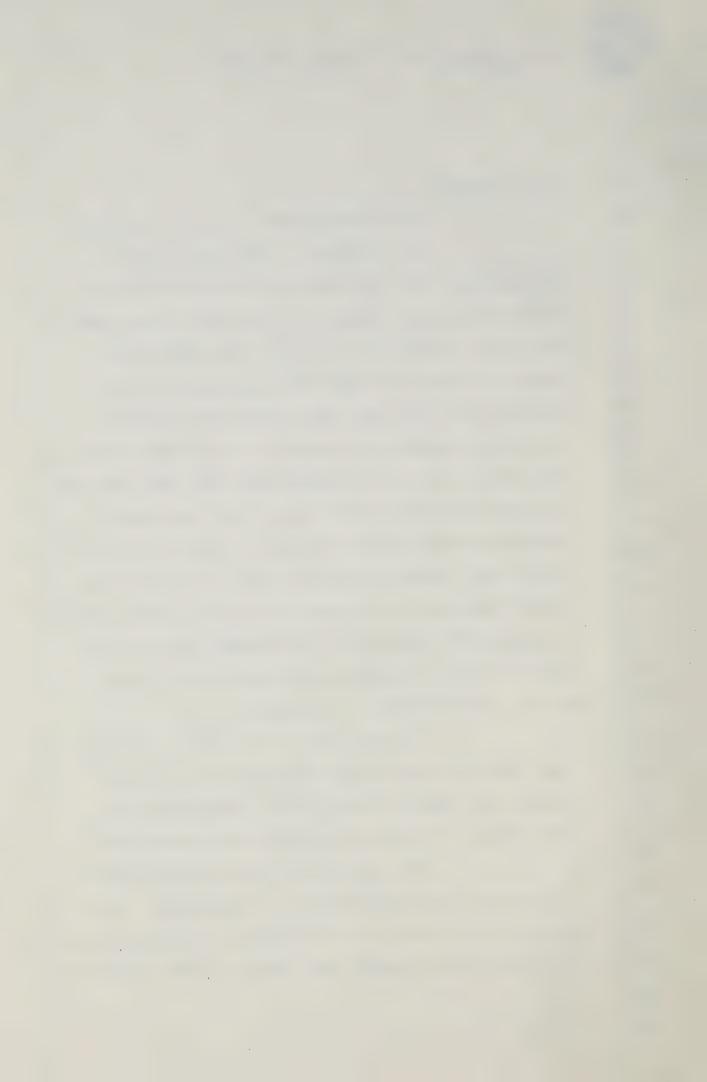
MR. STRATHY: I was dealing, Mr.

Commissioner, with the medication errors generally.

I made reference to specific cases and let me simply conclude by saying that we know that medication errors do happen in hospitals, particularly those not employing the unit dose system with perhaps startling frequency and based on the evidence that you have heard it is my submission that you can conclude, or expect, that medication errors that have been documented before this Commission, those on 4A and 4B and also those occurring on the 7th floor, were simply the tip of the iceberg and that a great number of errors did occurduring the epidemic period about which we have no knowledge and about which we are unlikely ever to have knowledge.

I submit that it is highly likely that some of those errors occurred with the drug digoxin and some of those errors involved giving that drug to babies who had not been prescribed it.

Following up on that, it seems quite
likely on the evidence, as Mr. Lamek noted, that
any such administrations of digoxin or misadministrations
of digoxin were probably not fatal or even harmful to





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the children that bot it and, therefore, the administrations went undetected. This is my submissiom, would account for the presence of what appears to be digoxin and I say, "appears to be", because I have some comments about substance X issue, but what appears to be digoxin in the exhumed tissue of three babies whose deaths are under review by the Commission -- and that is Lombardo, Belanger and Hines -- and I will comment and cite in more detail in due course on the pharmacological and the toxicological evidence pertaining to those babies.

As I have said, Mr. Commissioner, there is another kind of medication error that may have occurred at the hospital, quite possibly a fatal error which would account for the high ante mortem serum digoxin level in the case of Justin Cook. I put to you the possibility of an error occurring in the case of that child and, of course, of the efforts to save him after what is called the "onset of terminal symptoms", at 3:45 in the morning. It is to that case that I would now like to turn.

Now, MR. Commissioner, I know that when I put this proposition to you, that is that Cook

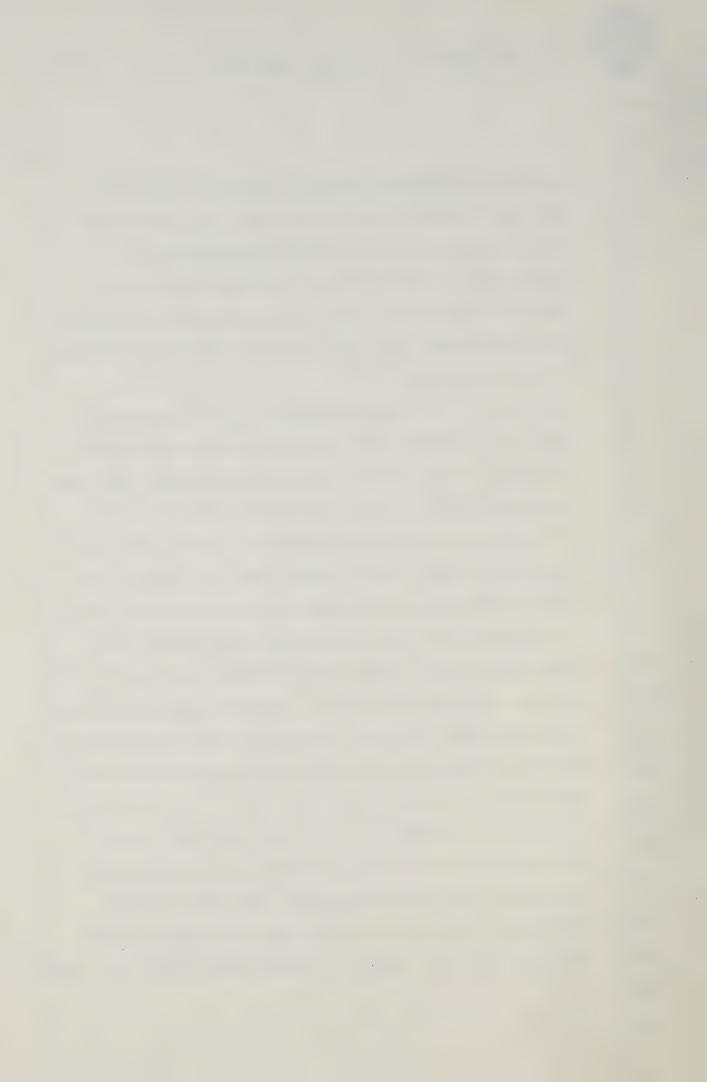


received an accidental dose of digoxin, I know that that is a scenario about which one may well have serious reservations about the probability or possibility of it occurring. Because for it to occur it would have to be the coincidence of a number of circumstances and I will come to those and, I hope, to deal with them.

I realize that it is not a scenario
that if one stands back and looks at it one is going
to say is a very likely scenario, but having said that,
I say to you, sir, that the murder scenario is also
on the face of it and if looked at in isolation in
the case of Cook, as Mr. Lamek asked you to do, that
scenario is also an improbable sort of scenario. So,
I simply ask for you to keep that in mind as I make
these submissions to you and if we are to look
at Cook in isolation, as Mr. Lamek has asked you to do,
asked you that in effect looking at the two possibilities
there are reasons to say why either one of them would
be unlikely.

Now, Mr. Lamek has asked you to use the case of Justin Cook as a model or a litmus test to aid in your assessment of all the other cases.

He has said that Cook is the case for which you have the best and most reliable evidence, and to use his words,



he has said that in the case of Cook," no other case is quite so clear as the case of Cook". What he then attempted to do in his submission was to exclude other hypothesis which would explain the evidence, most notably he attempted to exclude the medication error theory for which he said there was no rational evidentiary basis, no rational evidentiary basis for medication error and then, he, having excluded those other theories he asked you to conclude that the administration of digoxin which the child unquestionably received was intentional, i.e. that there was a murder.

Now, I will return shortly to why in my submissions the murder explanation for Justin Cook's death is an unlikely and improbable one in the circumstances. But let me first ask you to consider how a medication error may have occurred in the case of Justin Cook and let me refer you to the evidence which supports that possibility.

I said at the outset that I offer you no direct evidence that a medication error occurred and as I have already said that is the nature of the problem.

When Mr. Lamek says that there is no evidence that a medication error occurred in the case of



Coōk he is, at least, partially -- we are in agreement because there is no direct evidence that a medication error occurred. But Mr. Lamek offers you no direct evidence that a murder occurred, he simply puts the facts in front of you and asks you to find that murder is the most probable explanation.

Mr. Commissioner, I cannot exclude murder in the case of Justin Cook. As Dr Rowe said, I think near the end of his evidence in chief by Mr. Lamek, the chilling lesson that we learned -- or the hospital has learned as a result of all of this is that you can never in the case of a particular baby

death in a hospital exclude the possibility that that child may have died as a result of the intentional intervention of someone. I can't exclude the murder possibility. But what I do submit is that the possibility of a medication error at the time of the child's arrest is not only likelybut it is more probable than the murder scenario.

The scenario which I put to you is that at some stage after 3:45 a.m. Justin Cook was administered a dose of digoxin, most probably an adult vial of parenteral or injectable digoxin, most quite possibly by way of intercardiac injection and quite probably mistaken for another drug.





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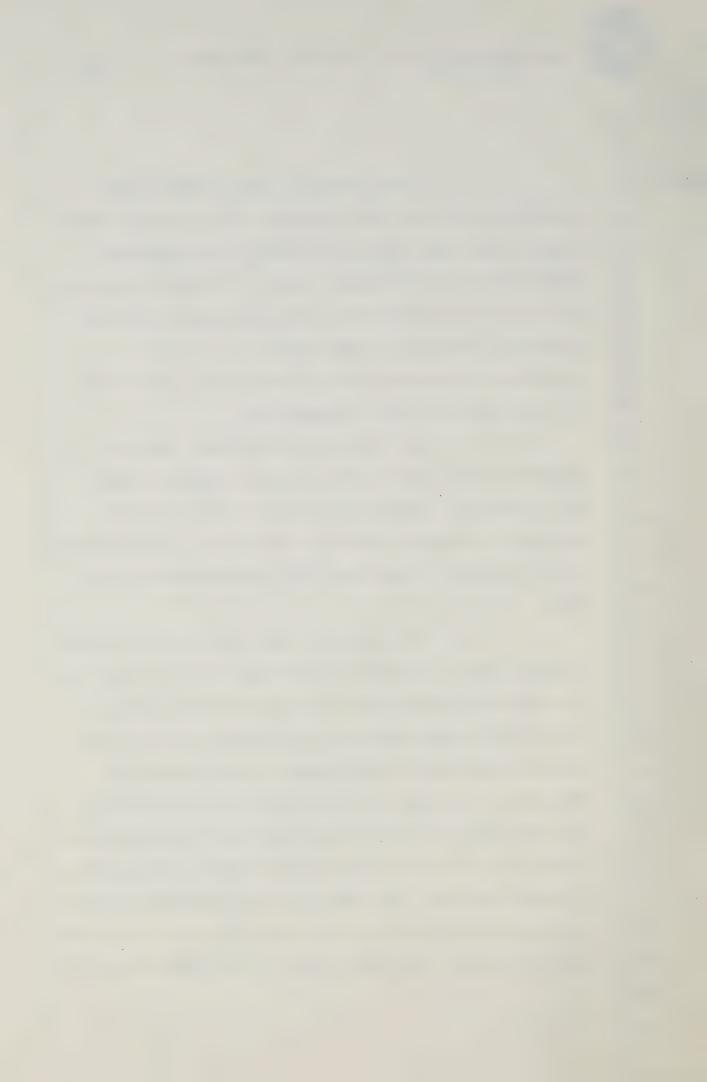
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I will explain shortly how in my submission that may have happened, but to begin with I submit there was nothing sinister or extraordinary about Justin Cook's arrest itself. Everyone agreed he was a very sick baby with transposition of the great arteries, and as Mr. Lamek pointed out he was scheduled for surgery the following day, and his hold on life was described as precarious.

The child had an earlier cyanotic episode or blue spell which led Dr. Kantak to take the relatively unusual precaution of ordering two syringes of Inderal taped to the bedside, an indication that the child's condition could deteriorate at any time.

Dr. Jedeikin (and this is in the chart at page 25) had ordered strict supervision of the child or constant nursing care. As far as I can tabulate one of only three instances of constant nursing care that we have seen in the course of the Commission.

The other two, Hoos and Estrella, but the fact that the child was on constant nursing care is an indication of the fact that the doctors felt that he might suffer a sudden decline. And that is of course what happened at about 3:45 in the morning when a Code 23 was called for Dr. Kantak, and then at 4:25 a Code 25 went out for



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the resuscitation team and the child was pronounced dead at4:56 a.m. So within just over an hour and 10 minutes from the time of the onset of his symptoms the child was pronounced dead.

Now I don't --

THE COMMISSIONER: I am sorry, the

time again?

MR. STRATHY: 3:45 Dr. Kantak, Code

23.

THE COMMISSIONER: Yes. And Code 25?

MR. STRATHY: 0420, Code 25 called.

THE COMMISSIONER: Yes.

MR. STRATHY: And 0456 child was pronounced dead. That is page 37 of the chart. Maybe not. Well, it really starts on page - the times are right my friend tells me.

THE COMMISSIONER: Pardon?

MR. STRATHY: My friend tells me the times are right and I will be referring to them shortly.

THE COMMISSIONER: Very well.

MR. STRATHY: The medication administration list is on page 30 which shows the drugs administered in the course of the arrest, and then Nurse Nelles' notes are on the previous page, talking about the time 3:45 when the onset occurred and



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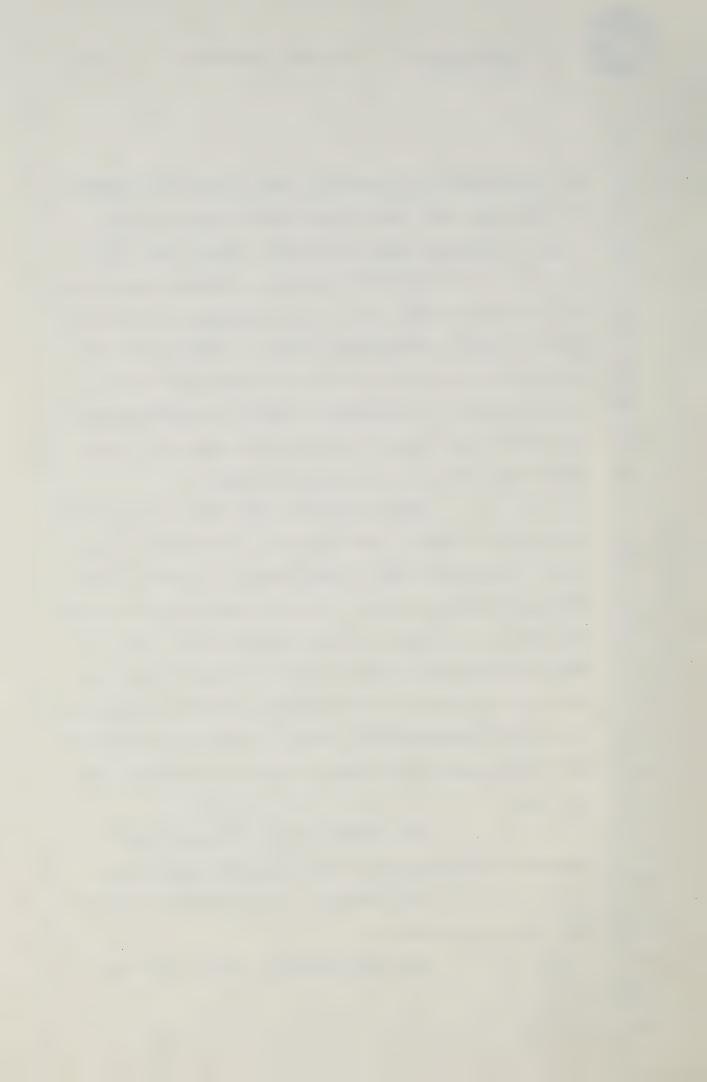
Dr. Kantak called, and then 4:20 I think is documented to have been the time of the Code 25 being called. And that is shown on page 30 as well, arrest call, 4:20.

Just to pause for a moment before going to the events after 3:45, in my submission as of that point, 3:45 in the morning, when the child went into distress, the ward was ripe for a medication error. I don't think it overstates things to say that people were obviously tired, physically and mentally tired. They were under a great deal of stress.

There had been nine deaths already in the month of March, more than any other month we have They were under a great deal of stress. There seen. had been evidence as to - it was known that an inquest was going to be held into the Pacsai death. The Miller death had just occurred the night before and then on the morning or the evening before Cook arrested the rather extraordinary events in relation to digoxin had taken place with digoxin being placed under lock and key.

THE COMMISSIONER: Wouldn't the emphasis on digoxin have made an error less likely? MR. STRATHY: I will come to explain why in my submission --

> THE COMMISSIONER: Yes. All right.



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MR. STRATHY: -- that is not so, but just dealing with the tension - let me deal with it just right now, sir. The very fact of the emphasis on digoxin and digoxin being locked up and put away and taken off the ward would in my submission make people less alert to the possibility of digoxin on the crash cart. If you think it is all being whisked away and being put under lock and key you are much less likely to be on the lookout for digoxin as being something that might be on the cart.

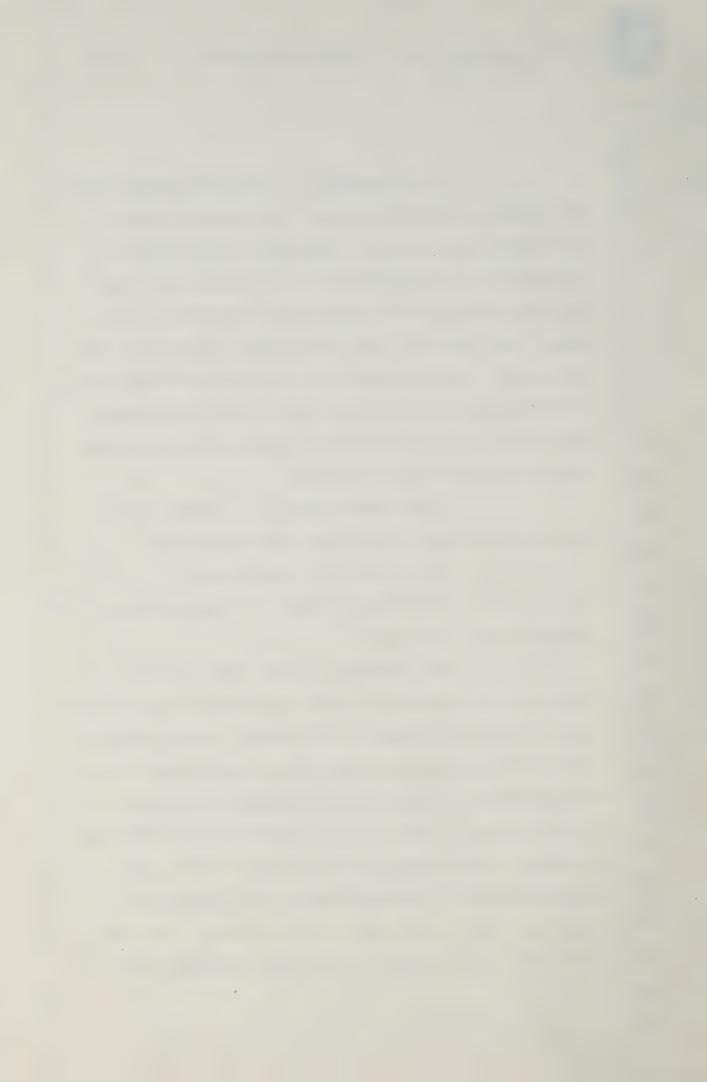
THE COMMISSIONER: I thought that

Dr. Costigan - was it Costigan and Mounstephen?

MR. STRATHY: Mounstephen.

THE COMMISSIONER: I thought they looked on the crash cart.

MR. STRATHY: Yes, and let's face it directly: I am positing to you that digoxin was on that cart and was overlooked in the search. Either that or it got on the cart some time after their search. But the more likely scenario in my submission is that it was overlooked. And that is precisely what would have to happen, and I simply put it to you that in the circumstances of the work Costigan and Mounstephen had to do (and I will come to this shortly) the work that they had to do and in the time available that



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evening, it is not in any way beyond the realm of possibles that they overlooked a vial. But I will come to that.

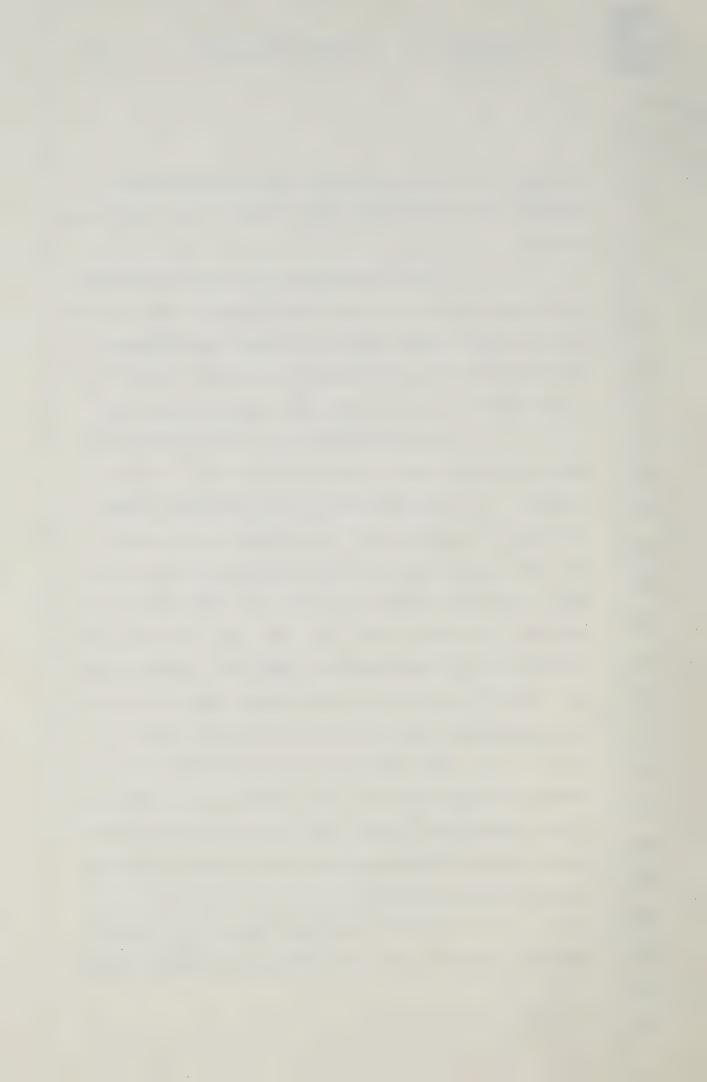
All I am submitting is that the stress on the ward would have been accentuated by the doctors coming on and a great fuss being made about digoxin.

The evidence was in fact that that did put people under a great deal of stress wondering what was going on.

Now according to Dr. Kantak when the Code 23 went out and he went to the room, it was his evidence - I will just give you the page and volume (it is Volume 135, page 3387) - according to Dr. Kantak when the arrest was called and he went to the room it was at that point that the crash cart was wheeled into the room. In other words, the cart went into the room not when the 25 was called but when the 23 was called, and I think he said that Nurse Nelles was in the room and someone else was bringing in the crash cart.

So from 3:45 on until the end of the arrest you have the crash cart, and it is my submission on that crash cart was at least one adult ampule of digoxin which had escaped the digoxin search and lock-up earlier that night.

Now if I may just ask you to look at the chart, page 30 and I am just going to note that at



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4 o'clock until 4:20 when the arrest was called there was atropine, morphine, atropine and also Inderal, all of which were administered I think the evidence shows by Dr. Kantak.

Then the arrest was called at 4:20 and the baby was intubated. It had one of those ventilation apparatus or bagging as the evidence mentioned. And there was bicarb 10 cc at 4:23 put into the child and the assumption I make and I think it is supported by the evidence is that that was put into the existing IV which the child had in his scalp.

Then 4:26, 4:27, 4:28, defibrillation, and then 4:20, 2 cc of adrenalin followed by defibrillation.

It doesn't tell us whether that 2 cc of adrenaline at 4:29 were intracardiac or not, but the one at 4:32 clearly was.

Adrenaline, 1 cc intracardia. And then at 4:37 and 4:42 - 4:40, 4:42 and following, there is a rapid succession of a number of medications, all really following, starting at 4:37 and following.

Now I will read the evidence in a moment, but what the chart doesn't show is that while this was going on the doctors discovered the child's IV had become intersticial, and that it wasn't working and the



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child's - the existing needle that was in the child was not functioning, and that is presumably the one that they put the bicarb into at 4:23.

Once they noticed that what they began doing in a rather urgent fashion was trying to get another IV into the child so that they could get some of these medications into him because they couldn't - the preferred way apparently was to put them in intravenous and until they had an intravenous line in they couldn't get medications in. So the evidence is that they first tried to make an intravenous cut in the bottom of the leg near the ankle, and then when that was not successful they were able to make a cut in the leg in the vicinity of the groin.

It was at the time of that second cut that the blood sample was taken, and that is the blood sample that contained the digoxin. Now that sample has always been referred to as the 4:30 sample because that was the time apparently placed on it. In my submission the 4:30 is an approximation and nothing more from the evidence, and I will be referring to the evidence very shortly. But in my submission that sample was likely taken at some point after 4:32 when the intracardiac adrenaline was administered because they would have had no need to administer intracardiac



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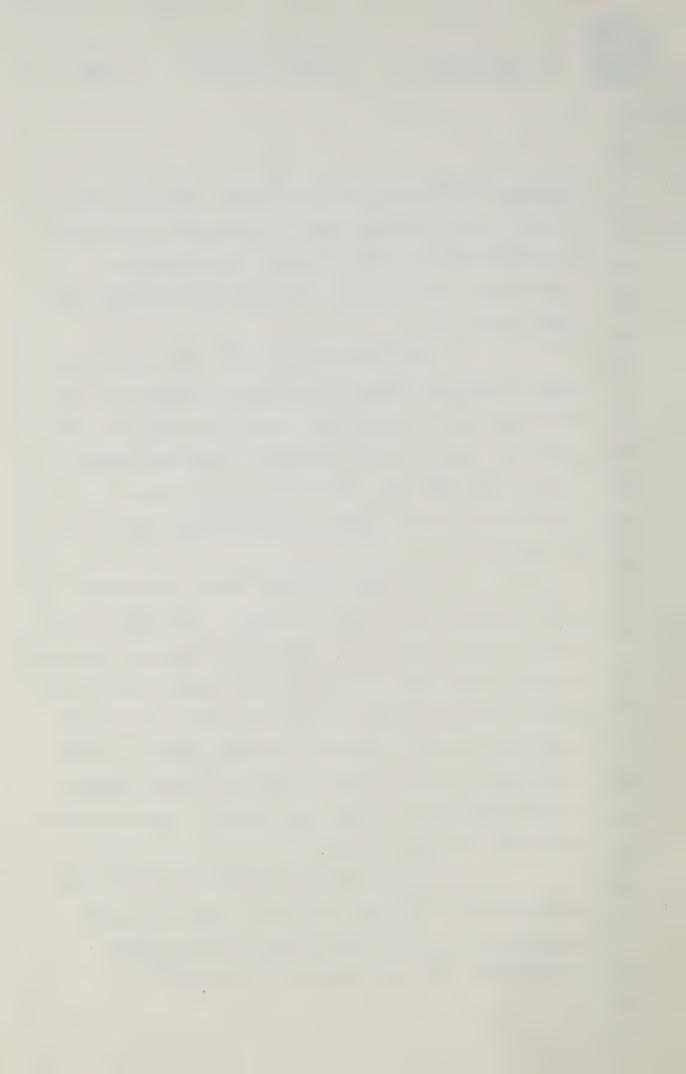
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adrenalin if you had the IV in place. So as I say, to call it a 4:30 sample may be stretching it by some minutes because the flow of drugs, the adrenalin, the bicarb, the adrenalin, Isuprel didn't really start until after 4:37.

My submission is, sir, that the blood sample was likely taken at some point between 4:32 and 4:37 when the IV was set up, so that calling it a 4:30 sample, I know it is not intended to mislead because that is the time that was put on it, but in my submission 4:30 was simply an approximation in the heat of the arrest.

My point is this, though, that quite apart from the tension that existed on the ward at the time of the child's arrest there must have been increased tension on the part of those members of the arrest team in this whole exercise of trying to get an IV line in place and trying to get the IV started so that it was undoubtedly a time of great stress and tension because a successful resuscitation meant that it was imperative to get the IV line started.

It is really my submission that at some point prior to 4:37 that child got a dose of digoxin rather than one of the medications that had been prescribed. And quite possibly it occurred in



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substitution for the adrenalin at 4:29 or 4:32, and it quite possibly, if it was in substitution for the adrenalin, it was intracardiac, and if it was intracardiac, Mr. Commissioner, it would account for both the high serum level that we see in this child but also the high tissue, heart and lung tissue levels that we have seen in this child.

Now the question is just, just before we come to the evidence of what was going on in the arrest, how did one or more adult vials of digoxin get on the cart? How did they escape detection?

Well, I obtained from the Registrar some of the vials that have been marked as exhibits. Exhibit 224 is a selection of vials including pediatric digoxin, atropine, heparin, another atropine and adrenalin or epinephrine, and then Exhibit 225 contains, among other things, a clear adult vial - that is the one in the middle - adult vial of digoxin.

Now I know that they are different.

I know the colouring is different. The writing is different. I don't even know that the vial of adrenalin that you see on the one exhibit is the same as the vials of adrenalin that were kept on the crash carts as a matter of routine, and I am coming to that evidence. But all I am submitting to you is that a vial,

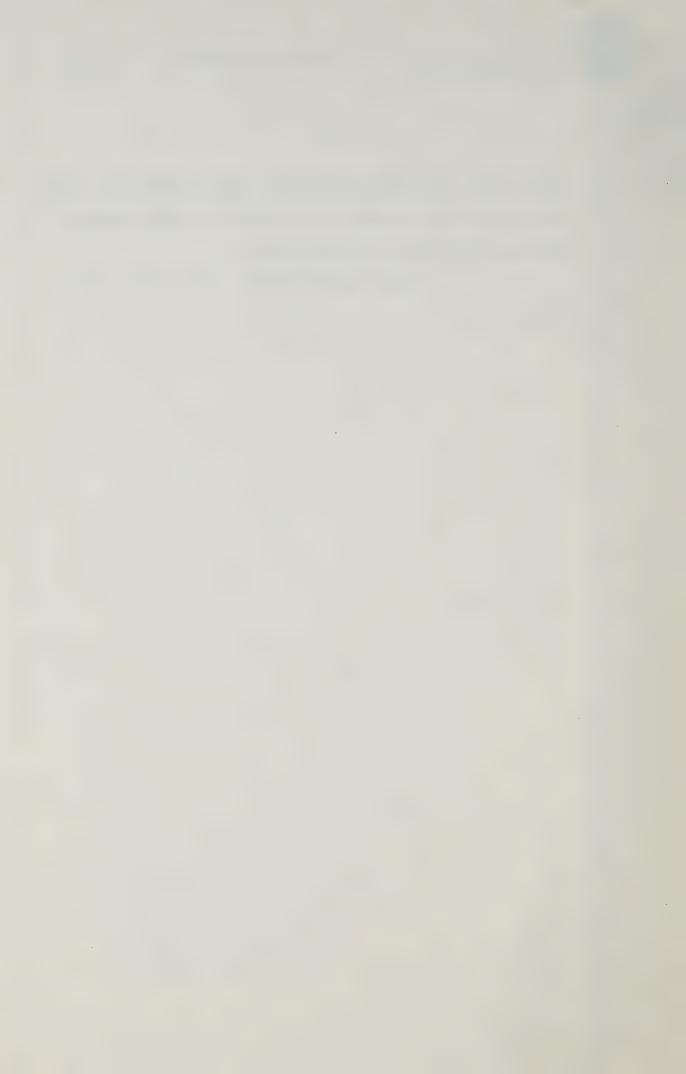


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adult vial of digoxin can be and the evidence is could well easily be confused with vials of other medications that are kept on the crash carts.

THE COMMISSIONER: This is an adult

vial, is it?



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The one in the middle there is the adult digoxin, clear I think, it is either green or black lettering.

THE COMMISSIONER: It is black. think green is probably --

MR. STRATHY: Adrenaline.

THE COMMISSIONER: No, the adrenaline is black, too. They both have the same colouring letters.

MR. STRATHY: The evidence has been, Mr. Commissioner, I think it was Dr. Spielberg who said, vials of digoxin resembled vials of many other kinds of medication that are used at the time of the arrest and he put to you and found, as a reasonable scenario, that a vial of digoxin could be confused with another vial of another medication.

Obviously the liklihood goes up as the similarity between the vials goes up.

All I am saying to you under this phase of my argument is that when Dr. Costigan and Dr. Mounstephen went around to look at the crash carts it is entirely possible that they overlooked one vial of digoxin, particularly if it was either loose amongst other vials or worse, in a box containing other vials.

I wonder if I could ask you to look at





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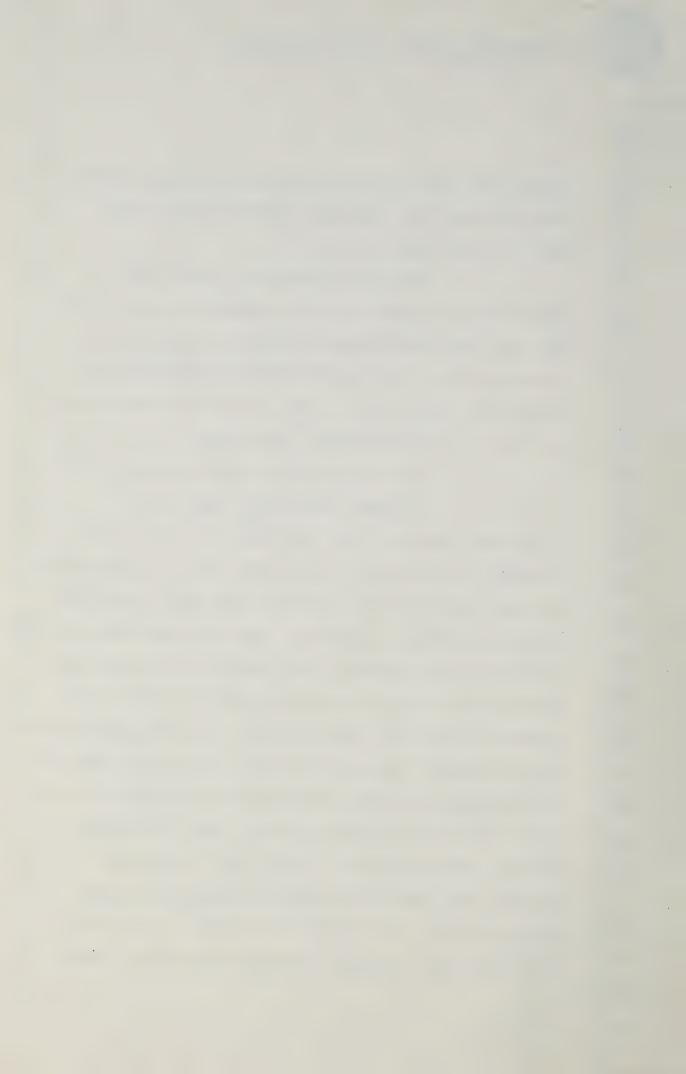
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Exhibit 165, which is the memorandum that Dr. Carver sent out when Drs. Costigan and Mounstephen were sent on their task.

What was interesting about that memorandum to me was, firstly, paragraph three asking that Dr. Costigan and Mounstephen do a check of all crash carts for parenteral digitalis preparations, as part of the measure to get the digoxin under lock and key, but also paragraph five says:

"All crash carts will be checked daily for the parenteral digitalis".

I have two queries. The first query is why is it necessary to check the crash carts daily if the digoxin is under lock and key, but more than that, does this exhibit or reflect a concern, does the memorandum reflect a concern that somehow digoxin had found its way onto crash carts when it was not supposed to be and that somehow digoxin had been confused with other medications in the course of arrests? Because that to me indicates some heightered concern that digoxin had found its way onto crash carts and that a daily check should be made to make sure that it wasn't on a crash cart, because the implications of it being on the crash carts in error, the risks of it being on the crash carts in error and the subsequent error being made,





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it might be preceived to be high.

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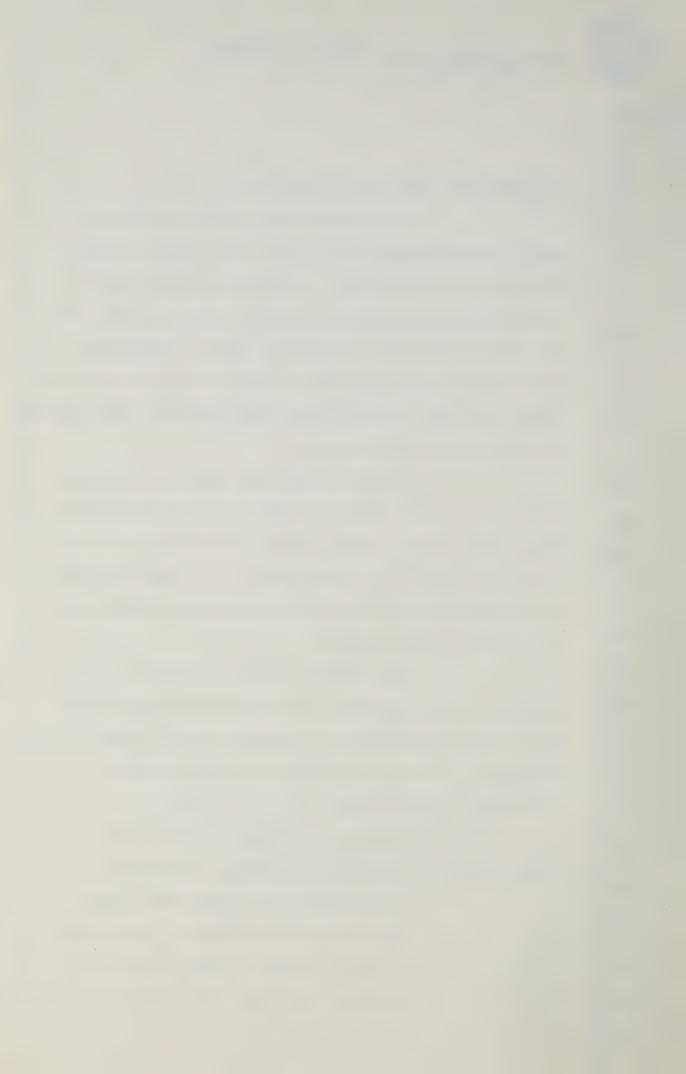
The evidence was really conflicting as to whether people did or did not expect to find digoxin on crash carts. I think the nurses pretty much unanimously said they didn't expect to find it on crash carts and I think Drs. Rose , Izukawa and Carver said that they didn't expect it to be on crash carts, but Dr. Fowler did say that he would have thought it would be on crash carts.

I think it was Dr. Costigan who said when he was going looking, when he was sent looking that night by Dr. Carver he did not expect to find digoxin on the crash carts and, as Dr. Spielberg said not expecting to find it, he might well overlook it if it was in fact there.

The evidence of Dr. Costigan, with respect to taking digoxin off the crash carts or off the ward, is contained in Volume 45 and at page 125 and following. This is in cross-examination by my colleague, Miss Forster.

At page 126, just over the page, at the middle of the page the question was asked:

> "Do you recall what you did see on the crash carts by way of medication? Oh, it would be hard for me to remember what ones were there, because



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I know sort of automatically what is on the crash cart and it would be hard to know what was there that night and what wasn't there.

Q. All right. Well, what is normally on the crash carts on Wards 4A and 4B at that time?

A. Well, the crash carts are usually supplied in a relatively uniformed fashion and the medications that they usually contain are things like bicarbonate, things like intravenous solutions, there is a drawer with all the equipment necessary for intubation and there is ampules of adrenalin and ampules of xylocaine or lidocaine as it is known."

Then he goes on to say that propranolol wasn't on the carts and over at page 128 at line 6 he is asked:

> "A. And the ampules you found are those the ampules that would often by injected into the I.V. bag or the I.V. bolus?

> A. Well, ampules come in different -at that point in time I think the



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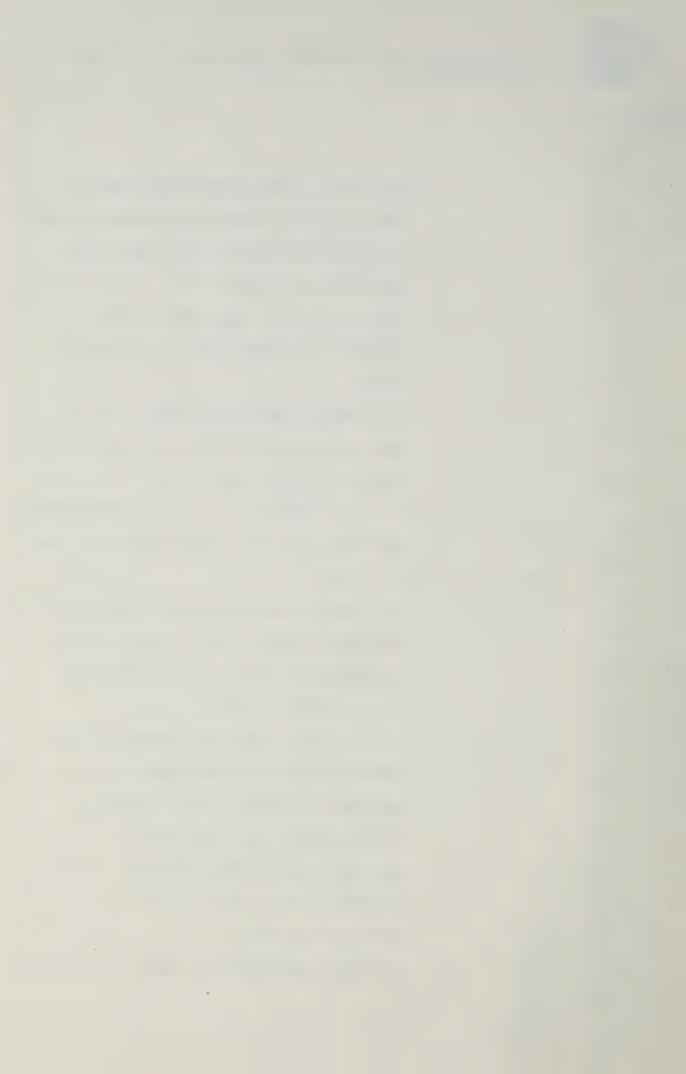
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majority of the medications were in what is called technically ampules which are the small glass vials with the break-off or file-off top. These would be drawn up and then used either directly, intravenously or whatever route.

- Would those be the same type of small glass vials that you would expect to find digoxin in?
- A. Yes, they are the same, approximately probably the same size as far as I know."

Then at page 129, line 9:

- "Q. Well, would you find loose ampules floating around in the cart? Do you find them in boxes, do you have any recollection at all?
- A. Oh, well, they have usually in one drawer if they are assigned to the medication or on a tray on top that would contain a medication.
- Q. Okay, and would this be a single ampule of each kind of drug in this drawer or the tray?
- A. My recollection is that there would



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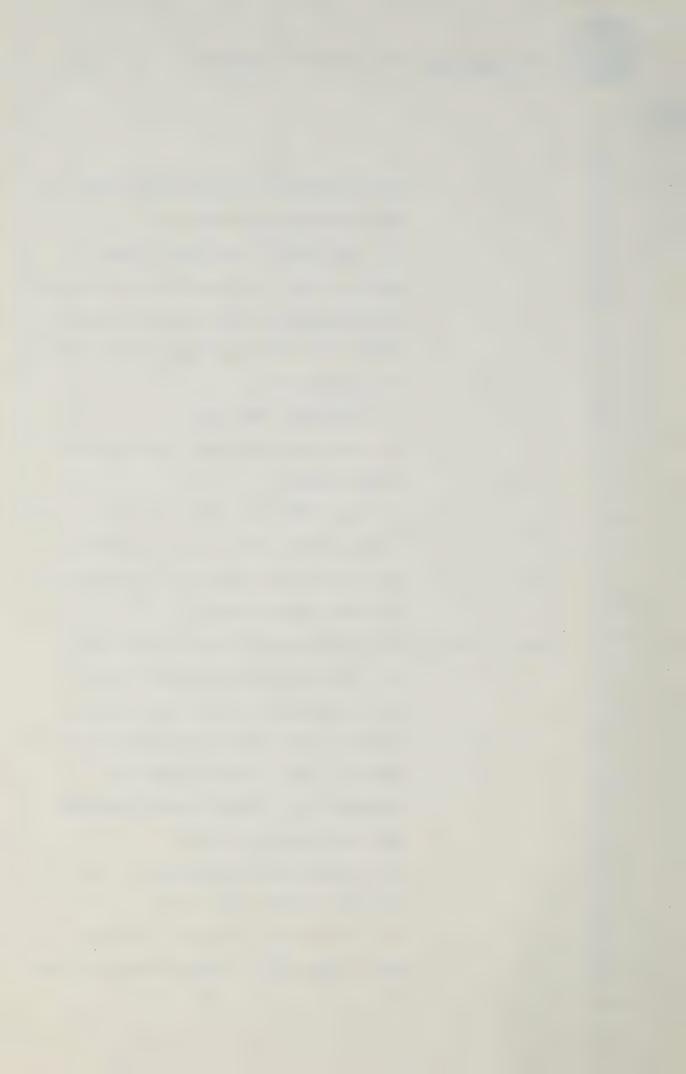
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be a mixture of one or two of each of the different preparations.

- Q. All right. But when you are talking about a mixture of one or two of the preparations are you talking about one or two ampules of each kind of preparation?
- A. Yes there was, yes.
- Q. And these ampules, are they all clear glass?
- A. Yes. Most of them are clear glass. There are a couple of drugs that are photo-sensitive that are kept in brown glass vials ."

Then he goes on to the bottom of the page to say:

- "A. We specifically weren't doing an inventory of other medications, we were really doing an inventory of digoxin. So, I can't record or recollect or I didn't record whether he found heparin or not.
- Q. Is that something that is often kept on a crash cart?
- A. I can't say, I don't think so. I don't think it is normally kept on the



crash cart.

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- Q. And what about epinephrine, do you recall seeing that on the crash carts?

 A. Yes, it is usually on the crash cart, yes. Did I say adrenaline
- Q. And they are also in clear glass ampules?

earlier; they are synonoymous.

A. My recollection is yes. It is a couple of years since I have seen an ampule of it."

So you have Dr. Costigan and Mounstephen going to the crash carts not expecting to find digoxin, not doing an inventory of the other drugs that are on the cart and looking on the cart not just in this ward, but on other wards, as well, looking on the cart to see if digoxin is there. I am not saying this in any way critical of them, because there is no evidence to suggest that one ought to be critical of them, although they did miss other areas in the hospital, but it is not stretching things in my respectful submission to suggest that in their search they may have overlooked a single digoxin ampule on this particular crash cart.

As I say, there was evidence that they



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did overlook some digoxin in other parts of the hospital. They found digoxin on a crash cart in Ward 4C or apparently, to the surprise of some who didn't think it was supposed to be on crash carts. There was a digoxin found on a crash cart in the operating room on the 22nd of March. There was evidence of digoxin being found on a crash cart in radiology. There was evidence that some digoxin had been missed in medication cabinets. That was found in the evidence of Dr. Carver, Volume 35, page 6890 to 6895, where he said,

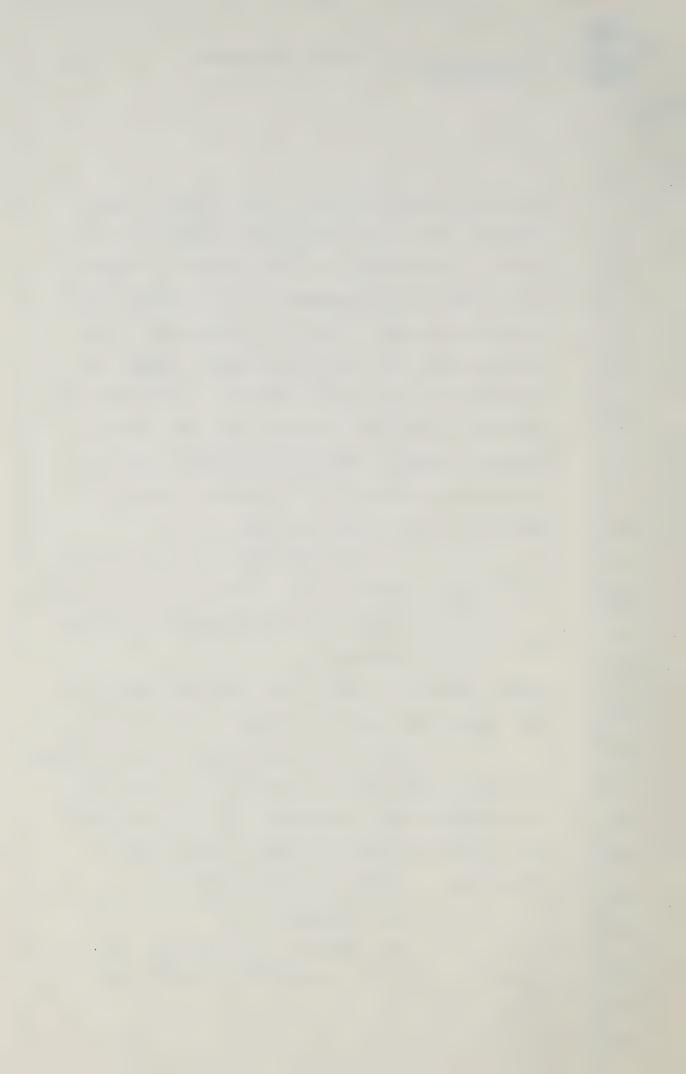
"In the immediacy and stress of the efforts of Dr. Costigan and Mounstephen it may have been possible to confuse ampules".

And he referred to some of the instances where in fact digoxin had been overlooked in their search.

Now on this particular point of missing the drug in the search, I would like to refer you to the evidence of Dr. Spielberg. It is at page 2840 and it must be volume -- I don't think I have a volume here. I think it is 56 or 57.

THE REGISTRAR: 55.

MR. STRATHY: No, it is not 55, I don't think. I think it is Volume 57, Mr. Registrar. I am



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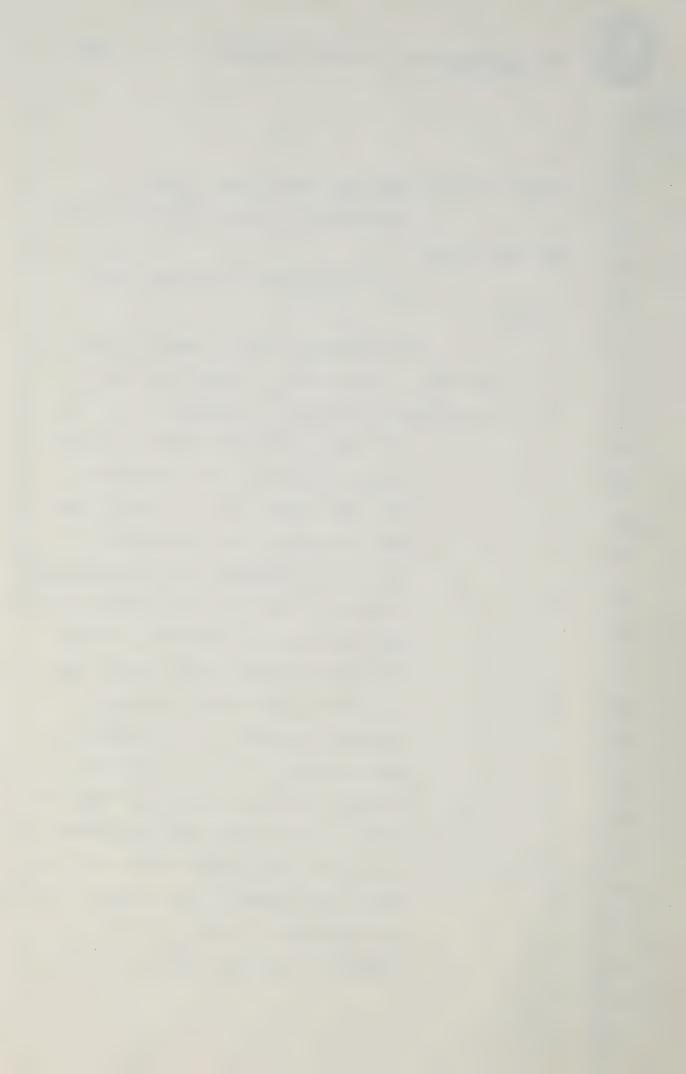
sorry, I didn't warn you about that. 2840.

I can read it to you, because I have got the extract.

THE COMMISSIONER: You might just read it.

MR. STRATHY: I will read it to you. It is page 2840. I am sorry, I thought you had it. This is the answer given by Dr. Spielberg.

"The issue being, again, and my concern is, with respect to that, that if a vial were missed, and it doesn't take much to miss a vial, particularly at 1:30 in the morning, under circumstances of doing a job which you are not normally used to doing, pharmacists normally do inventories and check drugs, this is late at night after a tense, difficult meeting, I am postulating that to miss a vial is not at all an unlikely scenario and that if that vial ended up being there then the possibility of all the rest," (that is the vial then being administered in the arrest) " becomes rather probable in fact. I also suggest on the other hand, and it is



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something we have to take into consideration, that somebody put it there to be used."

In other words, he says that it is possible that the drug got onto the cart in error. It is also possible that somebody put the drug on the cart.

"Q. All right. That is another possibility.

A. That is another possiblity. It could have been put there under a variety of circumstances again.

MISS CRONK: Q. Doctor, I wish to put it no higher than this and that is that if an ampule of digoxin was on that crash cart because it was missed the night before or because you have now suggested that somebody put it there deliberately with the intent that it be used?

A. Yes.

Q. After that specific event there are a number of other events or opportunities when that could have been corrected or detected; am I correct? "

Miss Cronk pointing to the number of occurences that



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would have to take place before the error would happen. The witness says:

"A. Certainly true.

Q. Before that drug reaches the child?

I wouldn't be surprised if all of them were missed, because in every error that is made in an arrest all of those same mistakes have to be made. Everytime somebody says, "give me an amp of calcium and they substitute epinephrine the exact same scenario occurs. The person who picked it up has to misread it. They have to load it into the syringe and they have to hand it to somebody who administers it who doesn't look at the vial and all of the same errors apply. In fact, they happen and they happen with a frequency that no one can estimate but certainly with a very real frequency."

So to go the first step I say that the ampule was overlooked and there were circumstances which would permit it to be overlooked.

Then the next question is when was that



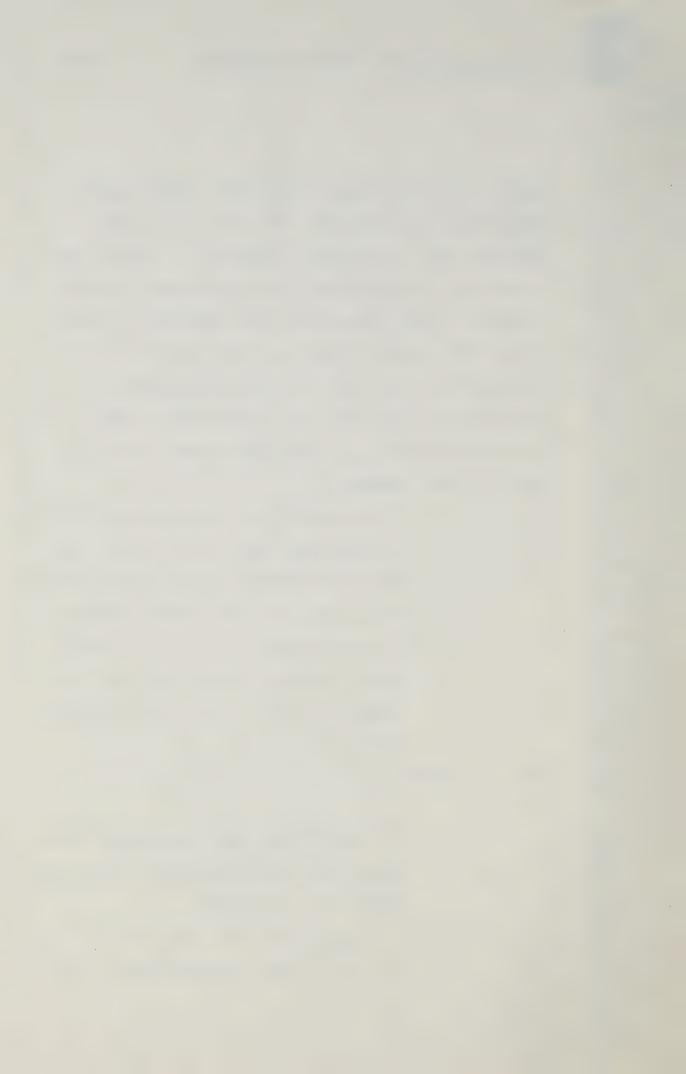
ampule, assuming it got on the cart, when was it administered and how does that tie in with the sampling that I referred to earlier? I think you do have, Mr. Commissioner, the preliminary inquiry evidence of Drs. Mounstephen and Jedeikin, Volumes 18 and 22. Letime refer you, first of all, to Dr. Mounstephen at page 105. If you could refer to that evidence with the chart beside you at page 30, the Cook chart. At the top of page 105 as he explains what happened:

"I was on-call as the associate chief resident and when you're on-call you carry the cardiac arrest beeper and you are on call for any cardiac arrests.

At approximately 3:45 a.m. on March 22nd, the bell boy went off, or the beeper went off, signalling a cardiac arrest."

Then at line 15,

- A. When I got there there were several people in the room already. They were around the baby's bed.
- Q. Do you know who they were?
- A. All I could remember was Dr. Roy



....

Jedeikin and the anaesthetist Dr.

Kantak, and a couple of the nurses

were there.

Then just stepping over who was there, onto the next page, Line 10,

"They were around the bed, around,

I guess, Justin Cook's bed. When I

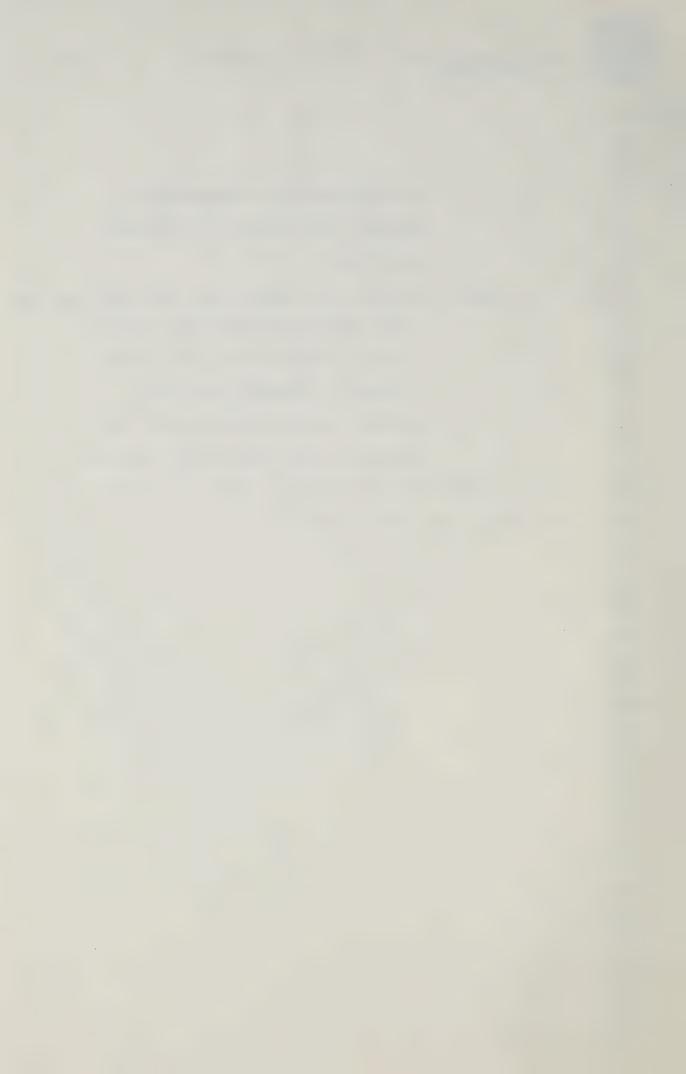
arrived Dr. Jedeikin was doing

external cardiac massage and the

anasthesis was ventilating the baby."

So just looking at the chart we must be around just after 4:20, 4:21 or so.

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JR/hr

So, just looking at the chart we must be around just after 4:20, 4:21 or so.

Now, he is saying that 3:45 the bell boy went off. That doesn't seem to tie in with when in fact the cardiac arrest was called and it would seem that if he was in -- in fact, had the incubation was going on and the cardiac massage was taking place it was sometime in fact after 4:30 when he got there.

And then at line 17, "ventilating the

baby":

"What you do is put the tube down the mouth, through the mouth through the trachea or through the nose to the trachea in order to give them oxygen, breath for the baby usually by means of a bag, you ventilate the baby's chest.

- Ω . Go on, please?
- A. At that time, as I said, Dr.

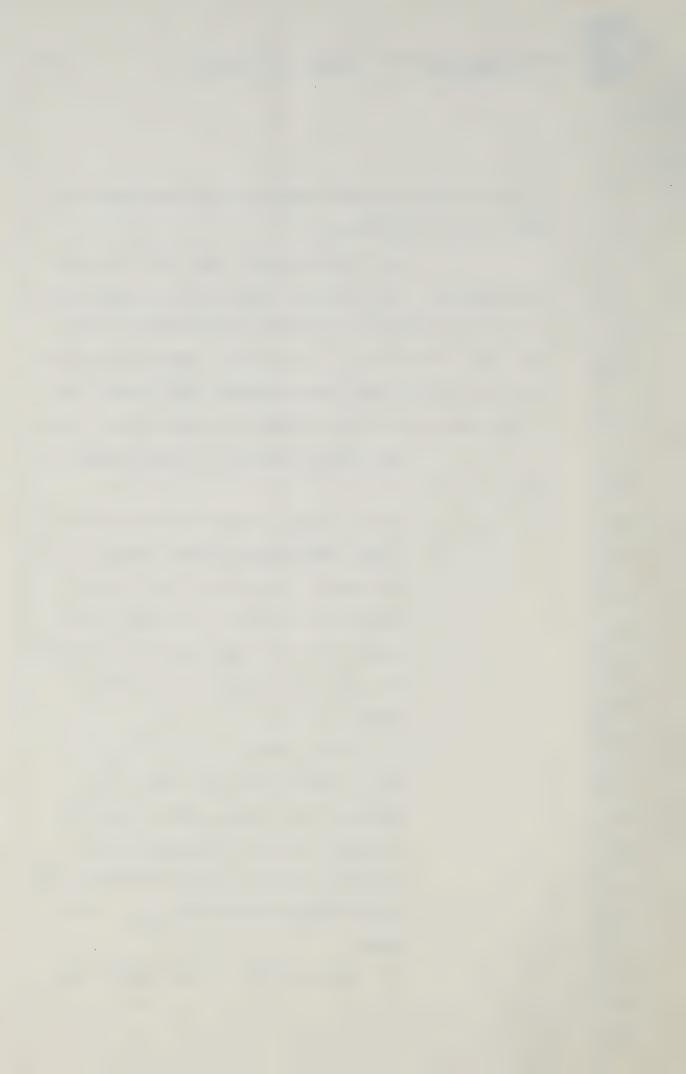
 Jedeikin was doing external cardiac

 massage and when the surgeons were

 arriving, just as I was arriving, they

 began trying to start an I.V. on the

 baby.
- Q. Start an I.V. on the baby? What



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does that mean?

A. Start an I.V. is to put a needle into one of the baby's veins or anybody's veins in order to give drugs or fluids through the needle.

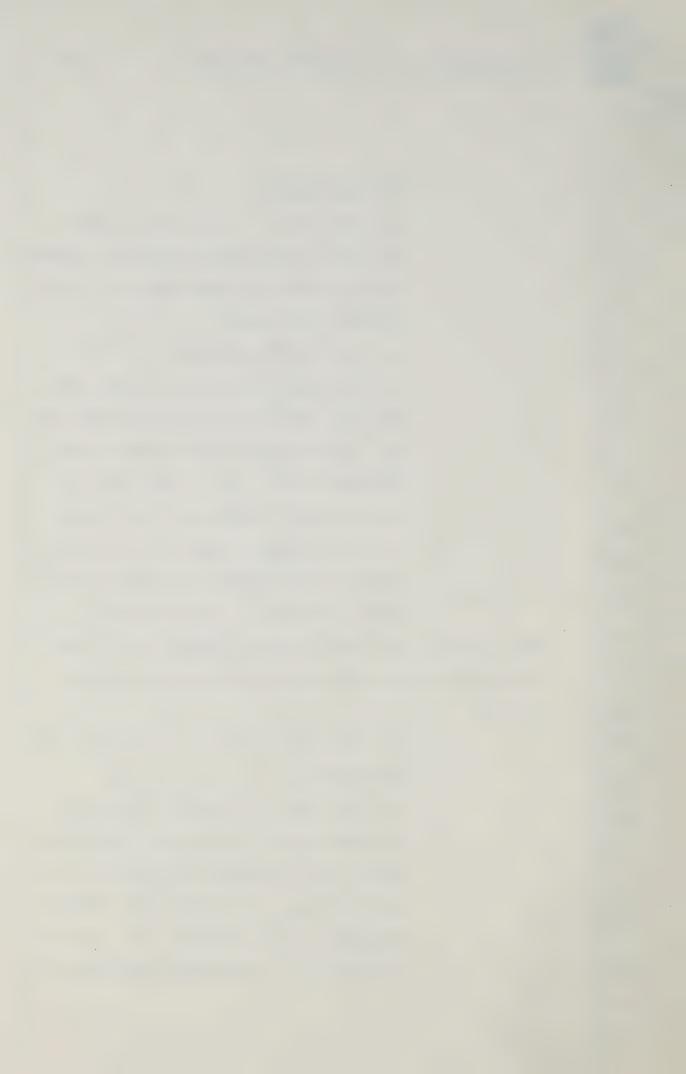
Was the baby already on I.V.?

A. The baby had an I.V. in the head, into the left frontal area of the head. It looked like it had tissued or had come out of the vein. Once the I.V. of the needle comes out of the vein it is no longer -- you can no longer use it to give drugs, so you have to start another I.V. to give drugs. "

That is what I was talking about earlier, sir, when I was referring to the scenario of trying to get an I.V. in:

> "O. Was the other I.V. started in the same place?

The I.V. was not started in No. the same place. As far as I remember, we had difficulties starting an I.V. in the baby. I think Dr. Roy Jedeikin was able to do a femoral stab and get a line, I.V., established through one of



the veins.

- O. Where is that?
- A. It is in the groin.
- O. Groin area?
- A. Yes.
- Q. The inside of the groin or the outside ?
- A. The inside of the groin.
- Q. Then what happened?
- A. I guess at that time we noticed the baby... the baby had been attached to a cardiac monitor and the monitor showed ventricular fibrillation or irregular rhythm and at that time Dr. Jedeikin attempted to defibrillate the baby by means of an electrical shock applied by paddles to the chest."

And you are looking at fibrillation 4:36, 4:37, 4:38.

"O. Yes?

A. The baby was defibrillated and came back to normal heart rhythm at that time. This lasted for a very short time. We turned back to ventricular fibrillation and this happened a number of times, baby being defibrillated



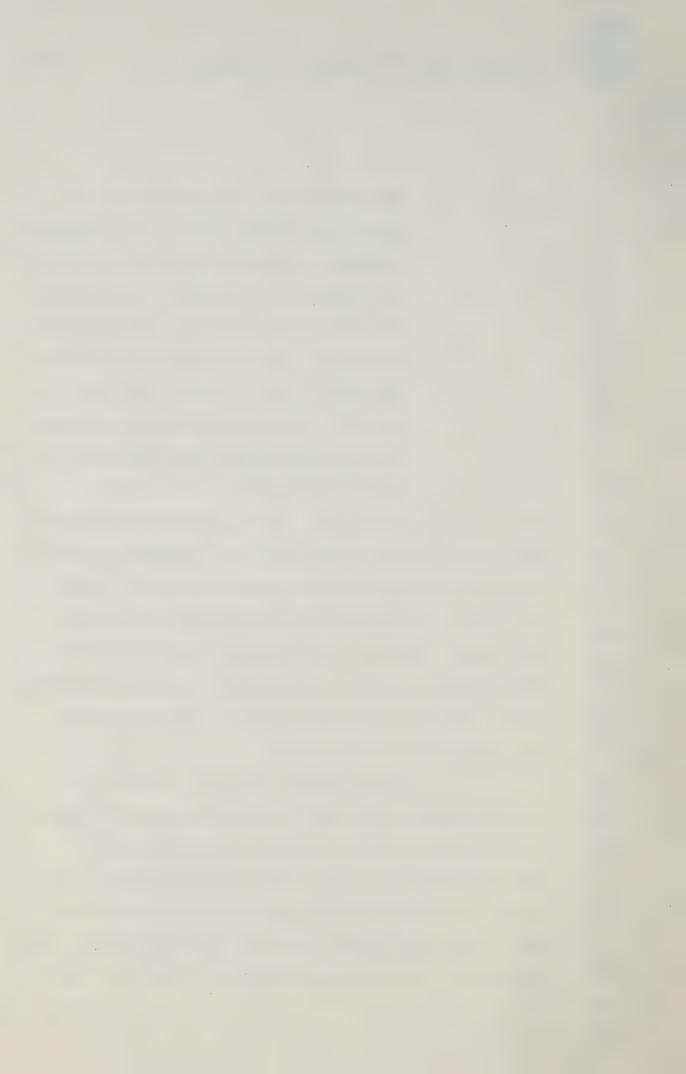
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and going back into ventricular fib.

going into sinus rhythm. This happened
a number of times. Because we couldn't
get another I.V. started on the child,
we couldn't give him any drugs during
this time. That is when Dr. Jedeikin
was able to do a femoral stab and do
the I.V. through the femoral vein and
through the femoral vein we gave a
number of drugs."

Now, it is not clear, sir, and I am asking you to do some interpretation here, but in my submission what he is talking about is the drugs after 4:37, being the drugs at least after and on perhaps later that that being the drugs given through the I.V. and the femoral vein, because if they were trying to get drugs into a child by I.V. they wouldn't have given that 4:32, adrenaline intracardia.

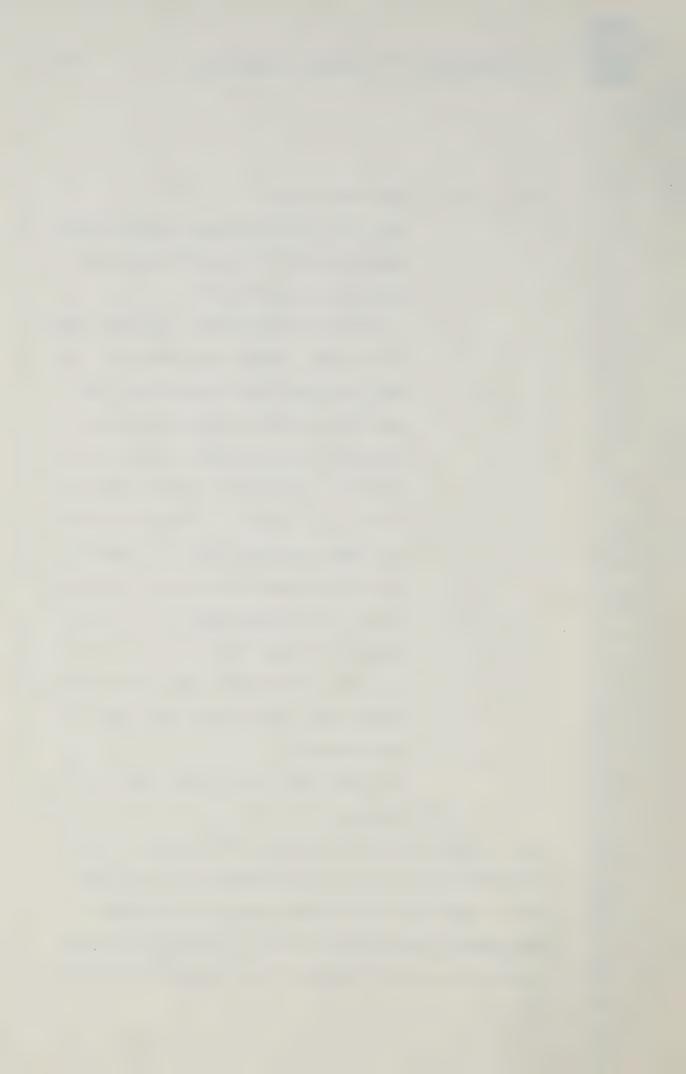
I will refer you to Dr. Jedeikin's evidence shortly but what this would appear to suggest is that their defibrillating, defibrillating, defibrillating, defibrillating. At 4:28 more defibrillating. At 4:29 -- or after 4:29 and then after 4:37 are they able to get this great number of drugs in fairly close succession. In one they get the I.V. set up. And



then if you go onto page 108:

- "Q. Did you list those drugs on the medical chart? You are indicating page 15 of Exhibit 21?
- A. The drugs started... we must have given some inderal and atropine. It says morphine and atropine at the beginning of the cardiac arrest and scalpel vein before we noticed it had tissued. It lists... we did defibrillation, 1, 2, and 3 three times and then we gave 2 cc's of adrenaline and had to defibrillate him again and had to give adrenaline, 1 cc intra-cardiac at that time.
- Q. Now, those drugs that were given, do you know where they came from, Dr. Mounstephen?
- A. They are kept on the crash cart on the ward."

Then he talks about the nurse having kept the list of drugs that had been administered and the nurse having kept the list of the drugs that had been administered during the arrest. We know, sir, just parenthetically, inderal, I am sorry -- lidocaine



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as found in the child's post mortem blood, according to Dr. Cimbura, is clean.

It is interesting to note, as the observation had been made previously, that there is no record of lidocaine having been administered at or during the arrest which leads to one of two conclusions, either it was administered in error or it was administered appropriately as an arrest medication and simply not charted.

And then, just over, if I may, at page 112 of the evidence of Dr. Mounstephen at the middle of the page... page 112:

- "Q. I am showing you another requisition form, same heading, same date, the time here though appears to be 6:05?
- Right.
- 6:05 hours. Again it says, "digoxin level" and that is your name on there?
- That is my signature. A.
- That is your signature? Did you complete that?
- I would have, yes.
- Do you know what that would have been for?



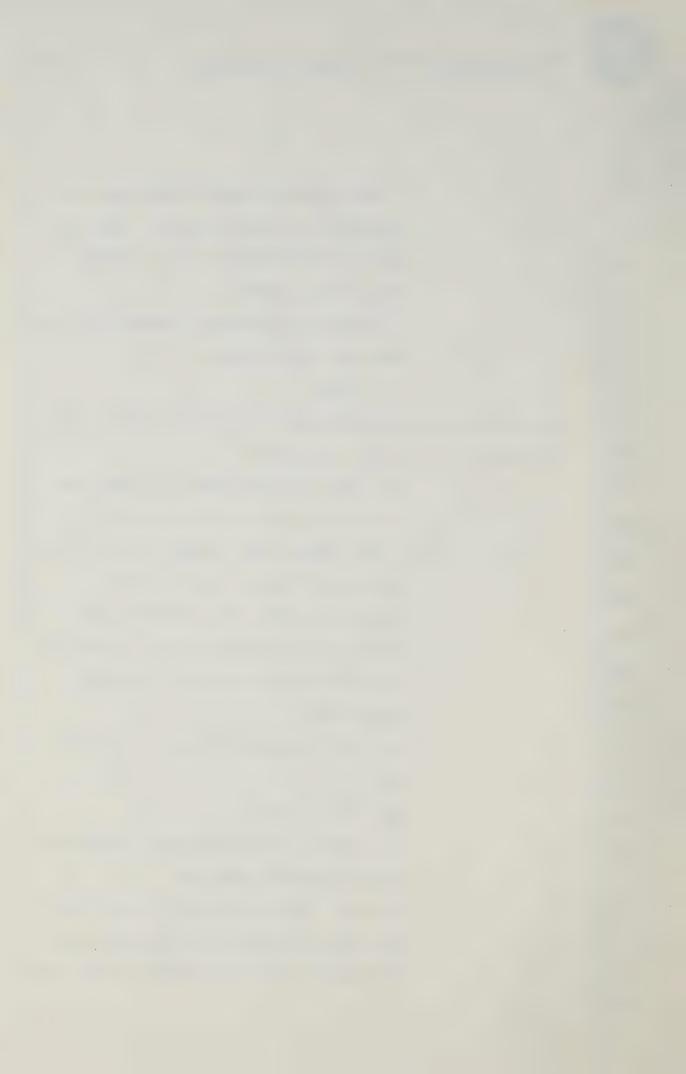
A. That probab	oly would h	ave been	for
the sample of	blood that	Dr. Jede	eikin
took from the	femoral ve	in durin	ıg
the cardiac ar	rest.		

- Q. During the cardiac arrest while the baby was still alive?
- A. Right."

And then that was entered as an exhibit and at line 15, page 113 and the question is:

"Q. You indicated both of these are in your writing and Exhibit No. 59 is the requisition number 05491 and it appears to have a time on it in addition to the 6:05 time that is stamped on the requisition. There is another time that appears you have written in?

- A. That's probably when I filled it out.
- Q. 04:30 hours?
- A. Right. It was probably during the cardiac arrest sometime.
- Q. So, 05491 would be a blood sample that was obtained by somebody during the arrest and you have put on the time



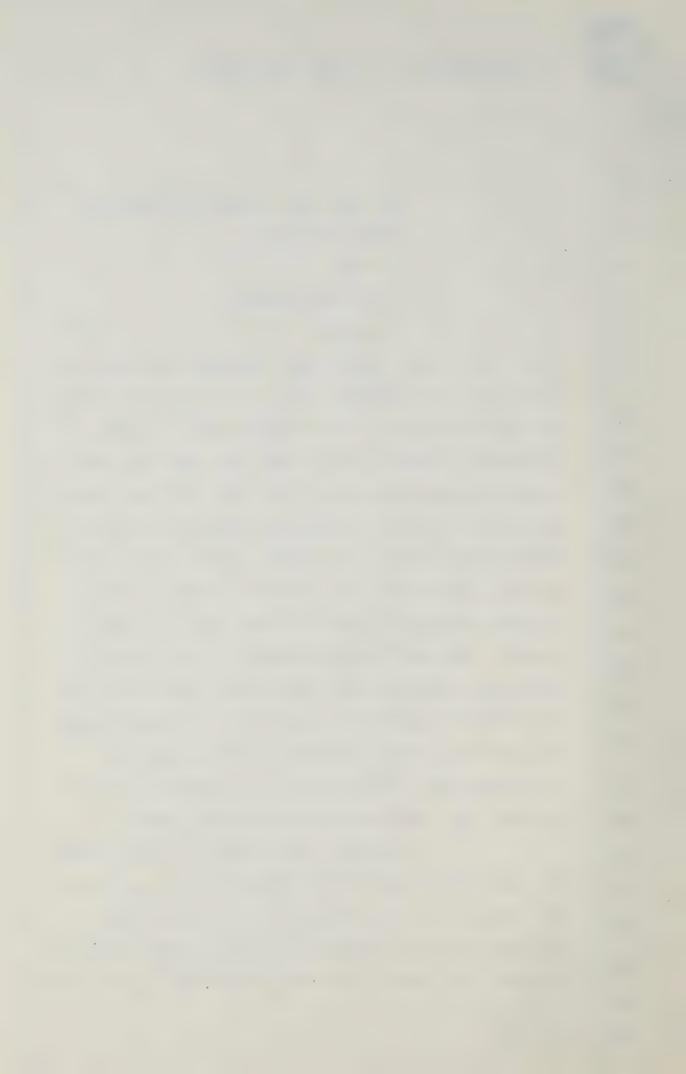
that the blood sample was obtained.

Is that correct?

- A. Yes.
- Q. As 04:30 hours?
- A. Right.

Now, this is the reason that the sample is referred to as the '4:30 sample'. Why have my friends called it the 4:30 sample? In my submission it is not stretching things at all to say that the 4:30 was simply an approximation of the time that that sample was taken. The more important question is not by whose watch was the 4:30 sample taken, or was it 4:30 on their watch, but when it relates to the various drugs being administered, was that sample taken? And what I would suggest to you is that it was taken sometime most likely after 4:32 when those two doses of adrenaline were given. I really submit to you that one or the other of those doses of adrenaline may in fact have been a dose of digoxin and may well have been an intracardiac dose.

And then I don't really think I need to read the evidence of Dr. Jedeikin. It is Volume 22, page 10, and it simply refers to the various efforts to get an intravenous line into the child and to fact that some of the medications were given intra-





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cardia.

The only thing that I might say is that Dr. Jedeikin refers to, in his evidence, at page 12, to the preassembled arrest of vials... that is medications already set up that could be given and simply injected.

I think the evidence is reasonably clear. I will be referring to Dr. Spielberg's evidence in that regard that those prepared -- or already prepared -- arrest medications did not come into use until sometime after the medication, after the epidemic period, and that is what is in existence at the time that Justin Cook died was a system whereby you had to draw out the vial yourself and measure it up and that it was, among other things, as a result of these events that led to the pre-package arrest drugs on the crash carts.

Now, how does this evidence or how does this possibility tie in with the digoxin data in the course of Cook?

My submission, Mr. Commissioner, that this child did get a dose of digoxin, particularly intracardiac at about 4:30, particularly intracardia, even with impaired circulation, it can explain how the serum level was so high and also how you have such



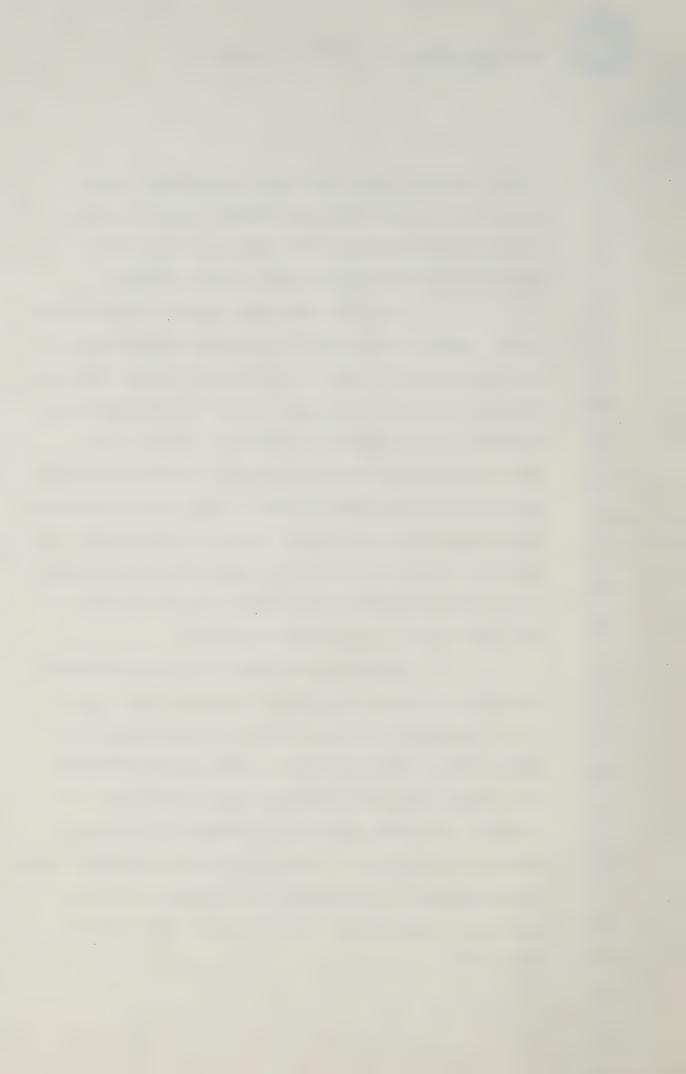


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a high level in the heart and in the lung tissue because if it goes into the heart, itself, rather than into the heart via the blood, it may well explain why that tissue level is so elevated.

All the questions asked of Dr. MacLeod by Mr. Lamek were posited on some administration of the drug prior to 4:26. I will come to why that was but you will recall that Mr. Lamek in his submission referred to Dr. MacLeod's evidence to exclude a medication error pertaining to all of the drugs that were given to the child prior to 4:26, but if someone simply goes that additional three, or additional six minutes, the 4:29 or 4:32, you have two opportunities there where adrenaline was administered and where the opportunity existed for an error.

Let me just refer you to Dr. MacLeod's evidence in Volume 63 of the transcript and I think it is important to recognize that I hope that the theory that I have put to you, sir, is not a theory that comes from the workings simply of my mind but it comes from the workings of minds of two highly respected doctors, Dr. MacLeod and Dr. Spielberg, both of whom posited this theory in the case of Justin Cook as an explanation for the levels that were observed.



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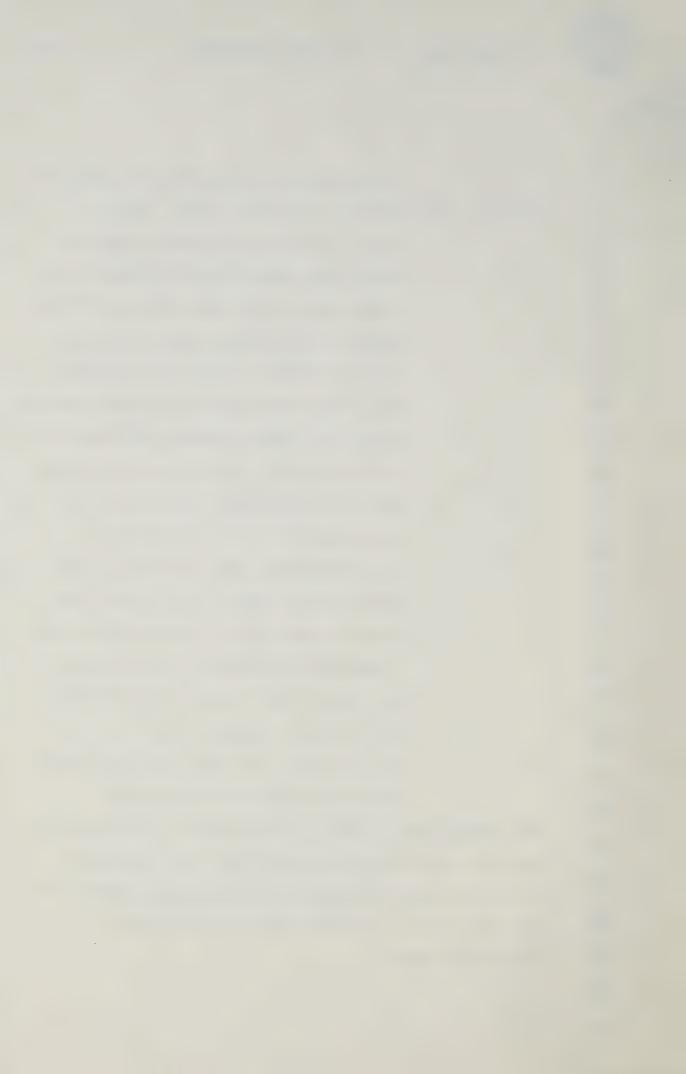
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If you look at page 4179, Dr. MacLeod's evidence, the question was asked by Mr. Lamek:

> "Now, given the information that we have, about the digoxin levels in the blood and in the fresh tissues of this child, Justin Cook, can you tell me first, doctor, whether you consider it likely that digoxin was administered during the resuscitation efforts here; that is to say, code 25 was called at 4:20 in the morning and death was pronounced at 4:56. Given the concentrations that we have, do you consider it likely that digoxin was administered within the period of the complete cessation of circulation?

- A. Can I just draw a quick picture?
- Yes, of course. Q.
- Because I am not sure that I made the point clear this morning. "

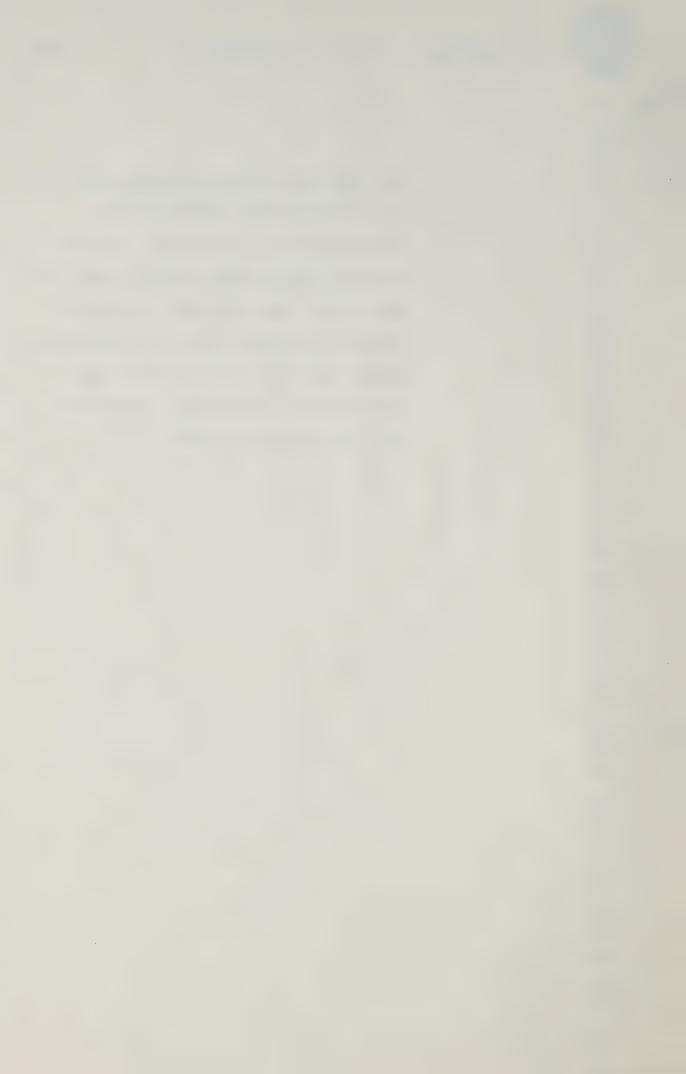
The point that I tried to make clearly in the morning was the lack of knowledge that we have about the effects of chronic digoxin dosing and the effect of the tissues of a chronic dose as opposed to a theraputic dose.





"A. Why I am concerned about this and it is really again the lack of knowledge and I am sure you are all sick of hearing that we don't know, but the truth - so, you know, you've got this distribution curve for digoxin and here, you know, you've got an alpha half life of, let's say, 20 minutes for the sake of argument."

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"I mean, it is logical to assume that you've got a converse of this which represents the distribution of the drug into the heart. So that if you look at this that, you know, with different concentrations, this presumably represents the increase in concentration in heart muscle as this concentration comes down."

I am reading you what he was saying when he was at the board and it is not easy to follow. His answer at line 16:

"A. Now this is what logic would tell you happens but what we don't really know and the point I was trying to make before lunch, we can't, it's possible that what happens is this, you know, maybe it goes way up and then redistributes and eventually levels up. We don't know because we don't have samples at five minutes or five seconds, to take an extreme example. So, we can't be sure but obviously there is a time dependent distribution of the drug into the tissue. It is just that



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we don't know the characteristics because we don't know the shape of that curve.

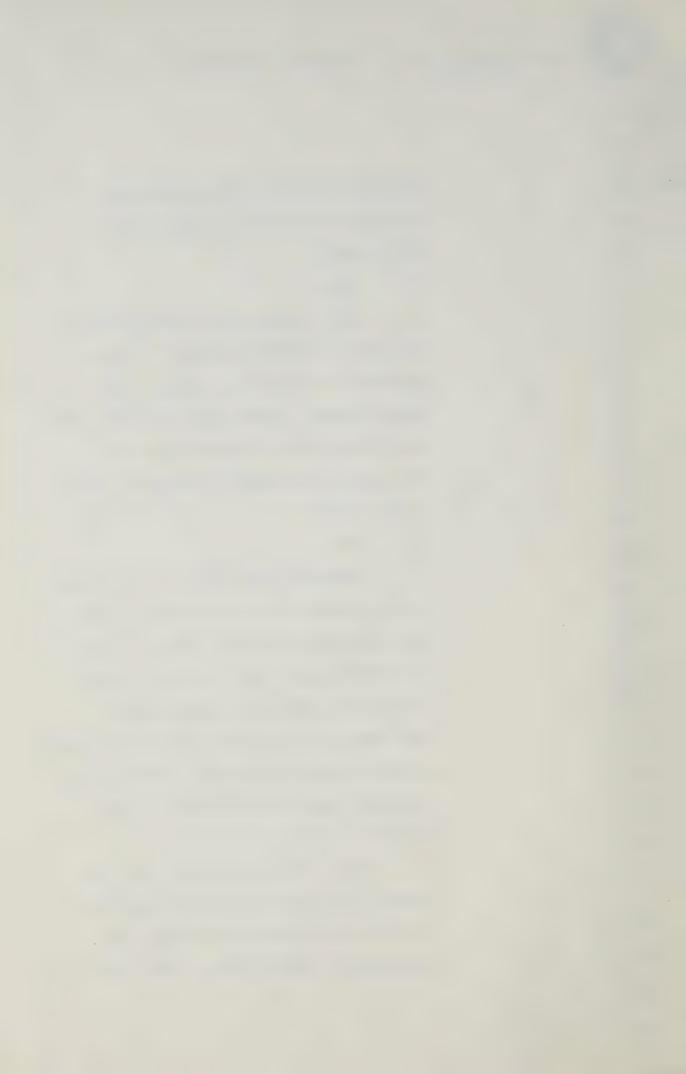
0. Yes.

A. So, I mean, having said that I will say, I think my answer to your question is that it is likely that it would require some period of time for you to achieve a concentration of 1100 plus nanograms per gram of tissue in the heart.

Ω. Yes.

Whether that time is 10 minutes or 20 minutes or half an hour, I can't say with any certainty. Well, I mean I can speculate, but you know, it is speculation based on nothing much more than my intuition based on 15 years of experience in clinical pharmacology. It is not based on any kind of hard data.

O. Well, Doctor, I don't mean to flatter you but 15 years of experience in clinical pharmacology gives your intuition a rather better base than it



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gives ours.

- A. Not much.
- Q. Can you give us your intuition?
- A. I imagine that the curve is something like the converse of the distribution curve. So that if it disappears from serum with a half life of 20 minutes then it probably appears in myocardium with a half life of 20 minutes. So, taking that assumption, it would probably take more than a half an hour to achieve this kind of concentration in myocardium. But I can't be dogmatic on it."

Now that is where Mr. Lamek picked up the 30 minutes time and that is why he got from 4:56 in the morning, deducts 30 minutes from that and goes to 4:26. And that is why Mr. Lamek put all the medications before 4:26 to Dr. MacLeod and not the medications after 4:26. And I think it is important to recognize that Dr. MacLeod is really saying, look, I can't be dogmatic; you are pressing me for an answer. I think it would probably take more than half an hour but I can't be dogmatic on it.

As Mr. Lamek says unfortunately the



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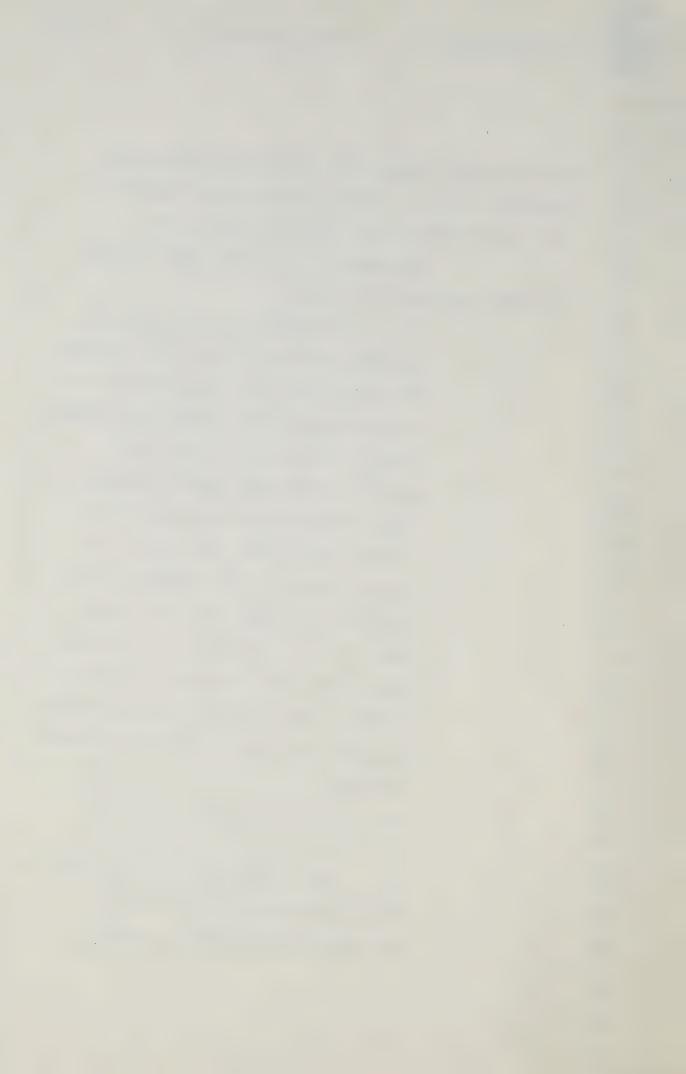
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doctor was not asked, well, assuming intracardiac adrenalin at 4:32 - assume intracardiac digoxin at 4:32 would that account for the tissue level.

But anyway to go on at page 4188 of the same transcript at line 3:

> "O. So, Doctor, in light of what you have told me is your best judgment and recognizing the reservations on it that you would have thought that rather longer than a half an hour would probably have been required between administrations and accumulation in tissue that we have seen here, and having looked at the recorded administrations of drugs from 3:45 to the time of arrest at 4:20, is it in your view likely that digoxin was administered to this child by mistake between 3:45 and the time of his pronouncement of death?

- Which was 4:56? Α.
- 0. 4:56.
- Yes, I think it is likely that it fell within that time interval." So whether Dr. MacLeod -- clearly he



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didn't have the adrenalin scenario put to him, but his likely was that it happened some time after the cart was wheeled in at 3:45 up to 4:56, and I suppose he would have put the range as between 3:45 and 4:26, which is in fact what he does over at page 4193, if I can just read that. 4193, line 4:

> "O. And if I understood you, I take it working back from 4:56, which is the last possible time in which there could have been circulation, spontaneous or mechanically induced, your better judgment is that the dose was probably administered more than 30 minutes before that moment?

That is correct.

THE COMMISSIONER: Before that?

MR. LAMEK: Before 4:56.

THE WITNESS: Prior to 4:26 is what we are really saying.

MR. LAMEK: Q. Prior to 4:26.

30 minutes before 4:56. Α.

The better judgment is that the dose was probably administered prior to 4:26.

And then over at page 4195 - I find it takes a while



for the question to come to a point that everyone feels comfortable with. At line 17:

"Q. Do I therefore understand you that your likely timeframe for the administration of the drug is between 3:45 and 4:25?

A. Yes, that is correct."

Now all I put to you, sir, is that well, it was not, unfortunately, put to the witness what about the possibility of 7 minutes after 4:25
and what about the possibility of intracardia. But
even leaving aside that possibility, it is clear
that Dr. MacLeod's evidence is that his best judgment
is that the medication administration occurred at
some point after the arrest was called.

The opinion of Dr. MacLeod was supported by the opinion of Dr. Spielberg: in this case at Volume 54, page 2155.

THE COMMISSIONER: 2155?

MR. STRATHY: 2155 of Volume 54, line 4:
"THE WITNESS: He (that was Cook) reachieved some circulation during that
period of time, which is the thing that
we cannot really deal with."

The period of time being the time of the arrest.



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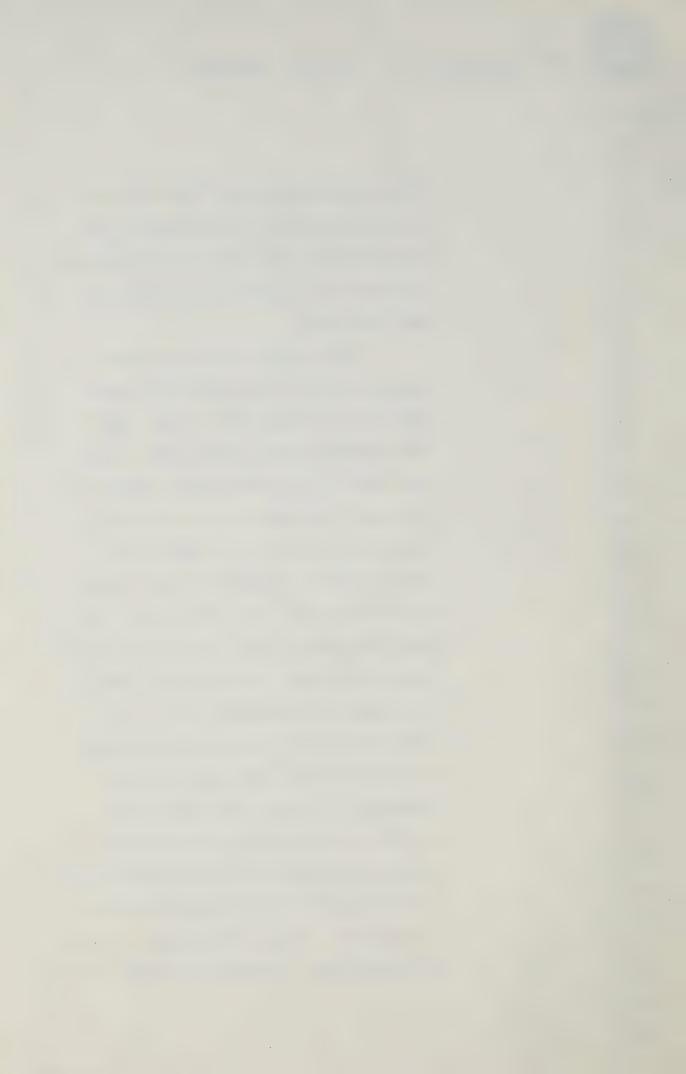
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"For a brief period of time after he was defibrillated, he apparently did go into some dysrhythm and circulation will continue, albeit not maximal or not very well.

The problem is we only have tissue levels in lung and heart and that, as was suggested, if the dose were perhaps given intracardia, that dose would distribute to the lungs and the heart preferentially and in the absence of a lot of information in other organs, it makes it very difficult to say much more than that. The blood injected (that is from the heart) would have gone first to lung, back to the heart, into the left ventricle, distributing to the coronary arteries, which would then have taken it into the heart. So that one might have gotten a situation with a few pumps on the chest during the resuscitation plus a brief period of re-establishment of circulation, enough distribution to have achieved that, particularly since we are



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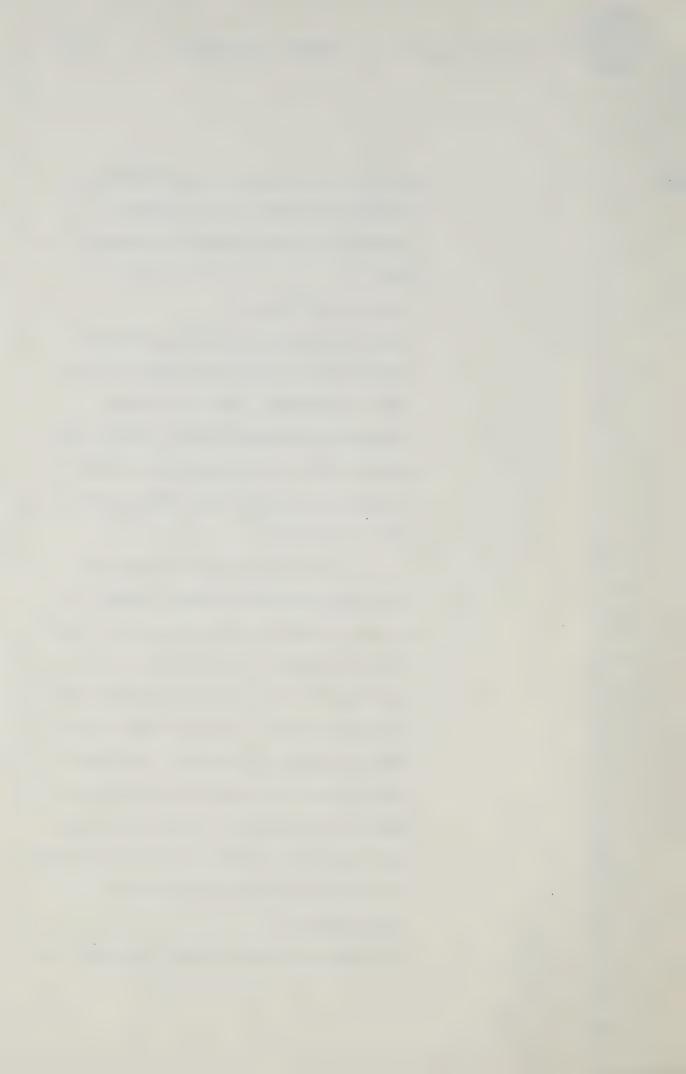
not talking about trivial amounts of digoxin. We are talking about a reasonably large amount of digoxin, in fact."

And then at line 6:

"The two possibilities are somebody intentionally gave this baby an overdose of digoxin. That has to be accepted as a possibility. The other possibility, as we suggested before, is that this baby received an inadvertent dose of digoxin.

How can we begin trying to approach separating these things? If we were talking about 12 vials of this and 120 vials of that, there is no question but that this would have had to be intentional. We could have ruled out the issue altogether, and that is why we had to go through the pharmacological exercise. There is no way that somebody is going to stand an open 12 vials of digoxin and give it accidentally."

I pause, Mr. Commissioner, and say that



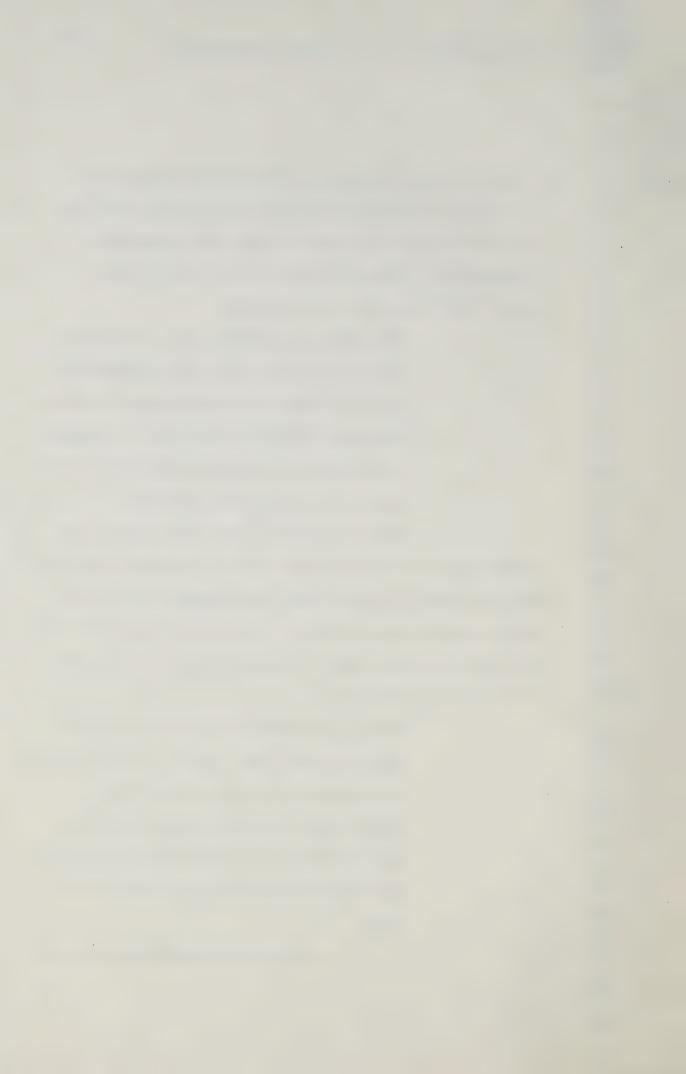
it seems rather unlikely that someone would go to the trouble of opening 12 vials of digoxin and give it intentionally. In other words the possibility of intentional administration of multiple vials seems a difficult one to envisage.

"If this is a single vial of digoxin, then we are left just in a pharmaco-logical sense at a breakpoint between trying to decide likelihood of intent or unintentional administration. How can we work out this further?"

Then he goes on and talks about the various events that occurred in the Hospital and the state of people's minds and the attempt to get the digoxin under lock and key. And at page 2158 he talks about the possibilities or probabilities of an error in those circumstances.

"Now, the probability of no digoxin being on the ward, which, I mean to say, no digoxin, has to at least be questioned somewhat, again, from experience of the similarity of vials and the situation on the ward at the time.

I think the possibility at least



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exists and has to be considered that, in the frenzy, number one, of trying to remove all the digoxin, some may have been missed.

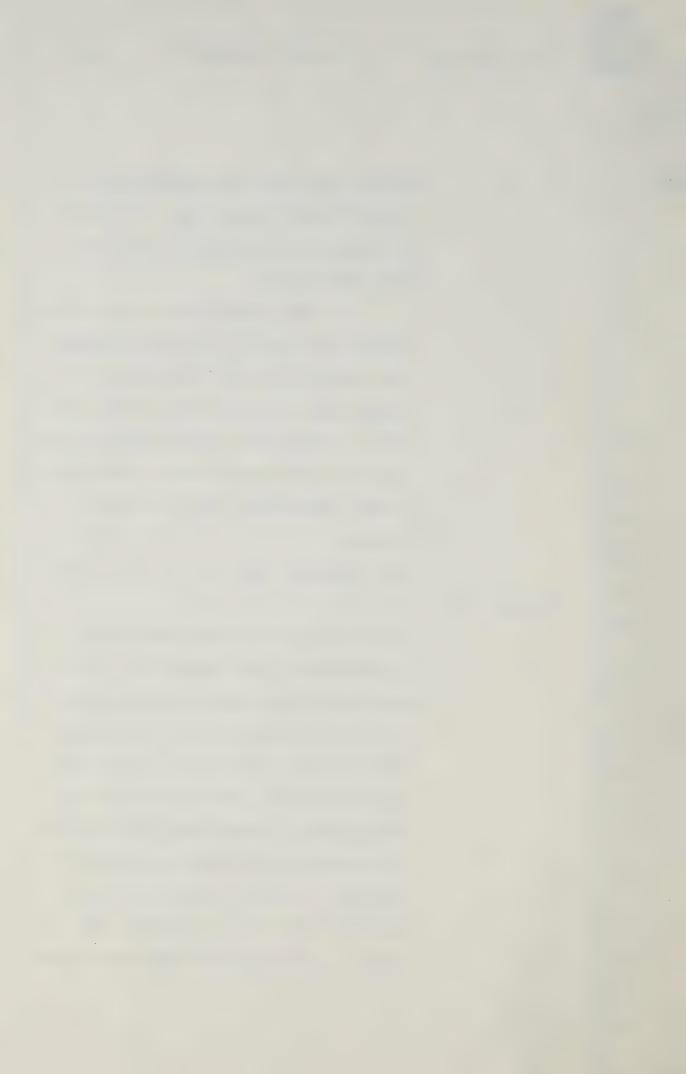
Is this impossible? Not in the least, in my mind, given what happens when these events are occurring in a complex and, at that time, rather sad ward. Looking for all the digoxin and trying to make sure there is none there, a vial conceivably could have been missed."

This addresses the question you asked

earlier, sir.

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"If a vial were missed under those circumstances, the probability of a medication error goes up dramatically in this child because the expectation is that there is not going to be any digoxin around. Therefore, when one looks down at labels which are written in extremely small sizes and which, frankly, I - and I know of no other physician who has not misread some labels, particularly at the time of an



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arrest. If some digoxin were around, the probability of an error is increased because no one expected it to be there."

THE COMMISSIONER: A psychological answer given by a pharmacologist, and I don't know that I agree with him.

MR. STRATHY: Well, except for this, and I understand your comment. You might be inclined to say, well, that doesn't make sense, but with all respect he is a pharmacologist who is someone who knows -- it is part of his job to know about how drug errors happen, how is it that drug errors happen. And what he is saying is that drug errors happen among other cases when people reach for a drug not expecting it to be there.

Now I put to you, sir, the same situation with the epinephrine/Vitamin E, that the nurse not expecting it to be there doesn't check, and I put to you, in the case of Cook --

THE COMMISSIONER: Yes, but there were other drugs there. On the crash cart obviously there had to be adrenalin, morphine, atropine --

> MR. STRATHY: Well, it is not clear --THE COMMISSIONER: -- all those drugs



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that evidence. 21

there.

MR. STRATHY: No, I'm sorry.

THE COMMISSIONER: Were they not?

MR. STRATHY: No, the Inderal was on

the end of the bed.

THE COMMISSIONER: Sorry, you are

quite right.

MR. STRATHY: It is not clear that the atropine was from the cart. I understood the evidence to be that there were really a fairly limited number of drugs that were kept on the crash cart. Adrenalin was one of them. Lidocaine was another. I'm not sure that -- I gather that morphine there is some doubt as to whether morphine was from the cart.

THE COMMISSIONER: Well, atropine and adrenalin were there. Certainly those two were on the cart.

MR. STRATHY: Well, it is not clear, sir, whether that atropine came from the cart or not.

THE COMMISSIONER: I thought we heard

MR. STRATHY: Miss Cronk has told us there is an inventory. Yes. Thank you.

MS. CRONK: There is an exhibit marked



before you, sir, an inventory of the drugs that were on the crash cart. The morphine was not. The evidence before is that morphine was not in this sense that it was fetched or brought from somewhere else.

psychologist, that's all. There were some clear vials, more than one (I would have thought seven or eight), at least two on that cart. What would you have to do as you reach for a drug? You would have to look for the name on it. I mean, you should look for the name. You can't just reach for any clear vial and expect that to be the kind of drug you are looking for. So you have to do some kind of distinguishing. Your mind is on digoxin because everybody has been talking about it all night.

MR. STRATHY: Well, the fact of the matter is when you reach for the clear vial, and let's say the clear vial is, as we know from there, one of the clear vials is the adrenalin vial, digoxin is also a clear vial --

THE COMMISSIONER: That's right.

MR. STRATHY: -- if you expect that the clear vial that you are reaching for --

THE COMMISSIONER: If there is only one



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clear vial left, I could understand. But there are at least two. Eliminating digoxin, there is -- because they are right here. I don't know which ones you are going to say are here besides digoxin, but adrenalin certainly was there. Are you not accepting atropine was --

MR. STRATHY: I am not sure that I do.
THE COMMISSIONER: Atropine, some of

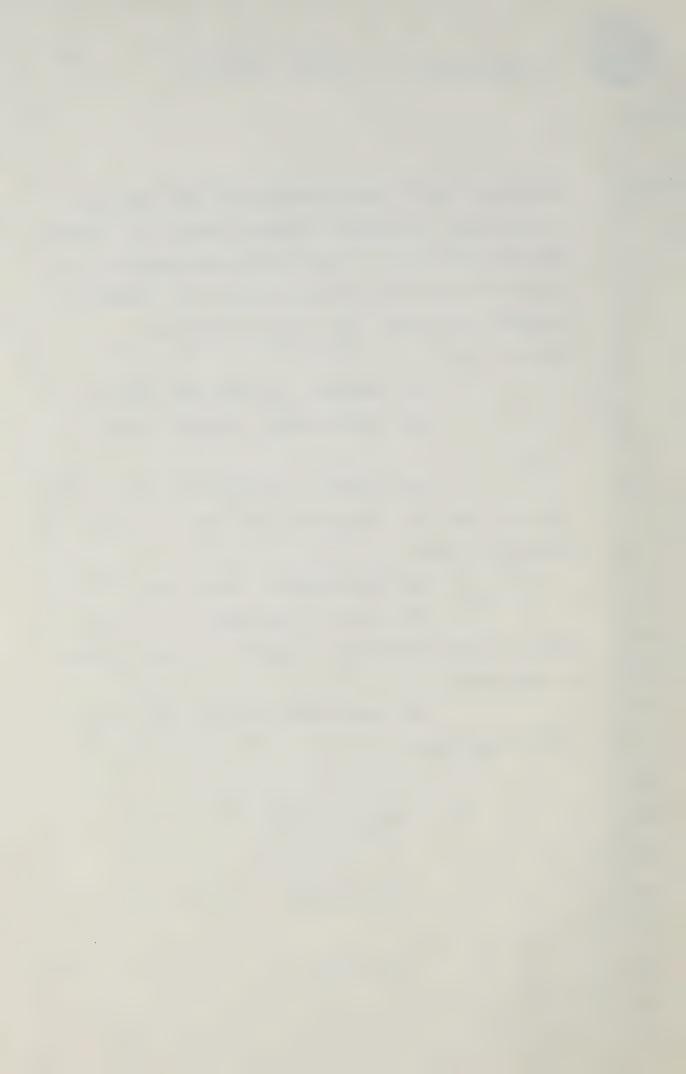
it is --

MR. STRATHY: According to Exhibit 295, which was the list of things on the cart, we have atropine on the --

THE COMMISSIONER: On the cart.

MR. STRATHY: Supposed to be on the cart. We have epinephrine supposed to be on the cart. We have Lasix.

THE COMMISSIONER: Have we any more of these vials around?



RD/ko

All I am saying is that you can't just reach for a clear vial, you have to do some distinguishing of what's left before it can function. Therefore, in fact, you are not expecting digoxin - perhaps it won't help you that much, because you still have to examine it and to be sure you are trying to put in atropine and put in adrenalin. I have no idea what effect it would be for that. I would have thought there would be, as likely or not, to be particularly concerned about digoxin being there, because having heard that day and the day before about all the fuss that was being made over digoxin.

MR. STRATHY: Well, the other scenario, sir, that I put to you is that people are less concerned about digoxin because they are told, yes, Dr. Costigan and Dr. Mounstephen came around and they checked the carts for digoxin and they took it away if it was on the carts and they locked it up and at that point --

THE COMMISSIONER: I am not sure they were told that, but they might -- certainly there was to be an inventory taken daily.

MR. STRATHY: Beyond that,

Mr. Commissioner, the evidence was that the two doctors

THE COMMISSIONER: The position you

are taking is that it is a possible scenario. I don't



know if you are making it as a probable one. The endocardiac adrenalin at 4:32 was in fact digoxin.

MR. STRATHY: Or the 4:29 adrenalin we don't know whether in fact that was endocardiac or not and the possibility also exists that that was digoxin or that some digoxin was given at some time in mistake for some other drug that was not even charted, because we know that Lidocaine was apparently given to the child some time, possibly during its arrest and if we know that Lidocaine was given and not charted what other drugs were given and not charted?

THE COMMISSIONER: That is fine,

thank you.

MR. STRATHY: All I am saying,
Mr. Commissioner, is that you do have the evidence of
Dr. Spielberg, a man whose job it is to know how
medication errors happen and who has told you this
scenario is one that would be conducive to the type of
medication error that I put to you.

Over at page 2162, Dr. Spielberg says:
"I think we have to recognized that
Justin Cook received somewhere in
the neighbourhood of 25 intravenous
medications from the time - and that
is an estimate; it may be a little



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"bit higher or lower, but that is what I have down from my previous notes. From the time of his initial blue spell at 1800 hours on the 21st through the end of his arrest, this baby had a heroic attempt made at trying to rescusitate him - every effort possible was made. Many, many, many different medications were administered and I think one has to at least accept the possibility that, of all those things, something was missed along the way."

Then he refers to the fact that Lidocaine was missed or was not charted.

Then over at page 2166 he says; at line

11:

"A. The problem is the adrenalin.

Q. Yes.

And some of the other medications which were then used on the crash carts. Adrenalin is prepared at that time. It was not in prepackaged syringes, as it is today. It came as a vial which you had to crack open,



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"draw up into a syringe and then you had to enter a second vial of normal saline to dilute the epinephrine. In other words, the epinephrine on the carts was concentrated epinephrine, and you don't give it in that form; you have to make a preparation of it. This takes time, and often, I remember as a house officer facing these kinds of situations, it can be very confusing and, particularly, in an urgent situation, you have to draw up the vial and then you have to draw up the saline in addition."

Then over at page 2168, line 8:

Yes. Now, the problem is that the vials, in one case, contain 2 cc and, in another case, contain 1 cc. The epinephrine being 1 cc and the digoxin adult strength being 2 cc.

In an urgent situation, you can't tell the difference between 1 cc and 2 cc.

Q. Are there not calibrations on the --



A. What you would be doing is you
would draw up a whole vial. The
physician asking the nurse to do it
says, 'Give me an amp. of epinephrine'
he doesn't say, 'Give me 1 cc of
epinephrine'. The nurse cracks open
the amp, draws up a whole amp, draws
it up in a normal saline to whatever
mark she is instructed to, and it is
given.

- Q. What type of syringe were you using?
 - A. 10 cc syringe, okay.
 - Q. All right.
- So the difference between drawing up 1 cc and 2 cc and then adding 8 or 9 cc of saline, it is unlikely that you would notice it, particularly during an arrest.

That is why we now have pre-loaded epinephrine - too many mistakes used to be made with it, and that is why we now have 10 cc syringes containing a 1 to 10 thousand dilution ..."

Then:



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"Q. Okay. Let's assume for a moment and we are getting very close to the end of the day and, actually, we are playing overtime at the moment; we are on injury time. Let's assume for the moment the possibility of administration by intra-cardiac injection in the course of this arrest, in the course of this resuscitation. The first intracardiac injection was t 4:32.

A. Yes.

Q. And the arrest was stopped at 4:56."

Then just the answer to the final question is at page 2170:

> "A. I cannot give you a hard answer on it, okay, because, again, of the variabilities. If it was put directly into the heart and there was adequate circulation to get it from the heart to the lung back to the coronary circulation, yes, possibly."

Then over at page 2171, line 15:

"Q. And you say you cannot tell me



"with any confidence whether in the space of 24 minutes in this circumstance that would have happened?

A. I think that is pharmacologically very reasonable. I cannot give you any hard data to back it one way or the other."

So what Dr. Spielberg does is posit
a scenario which he cannot give you a possibility level
any more than I can; sir, but I submit that he posits
a scenario which would explain the pharmacological
and toxicological findings in the case of Justin Cook
and which is one which you cannot exclude any more
than you can exclude murder and it is one, in my
submission on the evidence, that has to be considered
as a real possibility.

I think I have a little bit more to say about Cook, but I would appreciate --

THE COMMISSIONER: Yes. If we take 20 minutes are you still going to be all right?

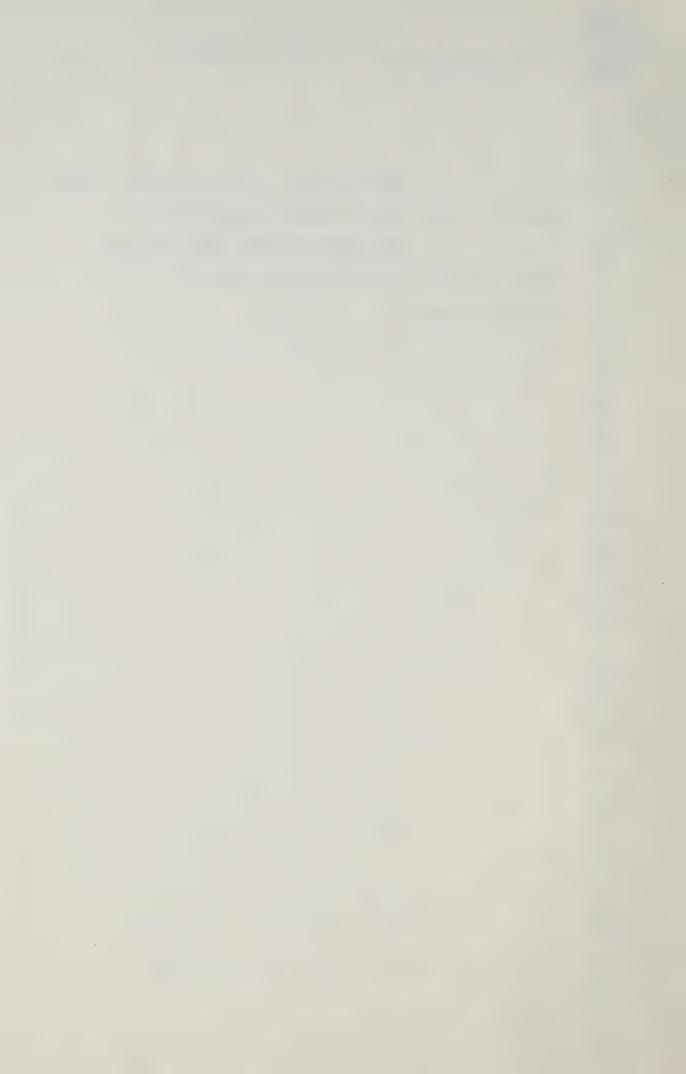
MR. STRATHY: I think there's a pretty good chance I can finish today. I am quite prepared to go a bit later today if you want to.

THE COMMISSIONER: Certainly we can sit late if need be. What is your position tomorrow?



--- Short recess

MR. STRATHY: I can be here. Quite frankly I would like to finish today if we can. THE COMMISSIONER: We will take 20 minutes and see if we can do it today.



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Just before with leaving the babies, Mr. Commissioner, and only for reference that I mention to you that there is also evidence by Dr. Spielberg on the same point at Volume 55, page 2196. I am not going to read it.

THE COMMISSIONER: Okay.

MR. STRATHY: Now, the only other thing that I would like to say with respect to Cook is this: I submitted to you that medication error theory in Cook's case was one that would have to be balanced against the probability of murder which is a theory that Mr. Lamek puts to you and the circumstances, which in my submission, dictate against murder and dictates in favour of medication error is the unlikelihood that someone, assuming murders had been taking place, the unlikelihood that someone knowing of the great to-do about digoxin in the ward as of the 20th and the 21st of March, knowing about the Pacsai inquest and its involvement in digoxin, knowing about the Miller death, knowing, most importantly, that the digoxin had now been placed under lock and key and there had been a great to-do about testing the oral digoxin, it seems most unlikely that that someone, knowing all that, would then proceed to administer a dose to Justin Cook, particularly because



Justin Cook was not a child who was meant to receive digoxin. It just seems like an unlikely possibility and one which suggests that the other possibility, that is that with everyone's mind thinking digoxin is off the crash cart, it seems more likely that possibility would explain how the child got an inadvertent dose.

THE COMMISSIONER: Well, I think it would make it truly unlikely if anyone thought that there was going to be any testing on a digoxin test. That is what Mr. Lamek -- he says that it stopped not really so much necessarily -- necessarily so much because of the arrest of Susan Nelles but because of taking the team off the ward or because of any of the supervisors -- or perhaps the supervisor, it was the likelihood of detection that would have the effect.

MR. STRATHY: But doesn't it seem odd
that given the situation that prevailed on the ward on the
night of Justin Cook's death, the great to-do with the
Pacsai inquest, the great to-do about Miller and a
great to-do about digoxin itself, that somebody who
had been going about doing this sort of thing would
in the face of all that risk further detection by
carrying on particularly when Mr. Lamek has posited
that that same somebody paused in the fall of 1980 and



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paused again in January and February of 1980, doesn't it seem strange that that someone would carry on in March? I would simply put it to you as a circumstance.

THE COMMISSIONER: Yes. Yes. All

right.

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MR. STRATHY: What I propose to do
now is to touch briefly on some aspects of the evidence
pertaining to other children and what I would hope to
accomplish in the course of doing that is to tie in some
submissions with respect to the pharmacological and
toxicological evidence. I wonder if I might file some
written submissions in this regard?

THE COMMISSIONER: Yes.

MR. STRATHY: And some of my friends?

THE COMMISSIONER: Those are exhibits?

MR. STRATHY: I think that is quite

acceptable to me.

Now, I am not going to read these. I will read from them from time to time dealing with specific children. They are entitled "Submissions of Counsel on behalf of Phyllis Trayner with respect to Pharmacological and Toxicological Arguments by Commission Counsel". And in fairness, I have to give the credit to my colleague, Miss Rae, who is actually Dr. Rae and who actually has a considerable knowledge.



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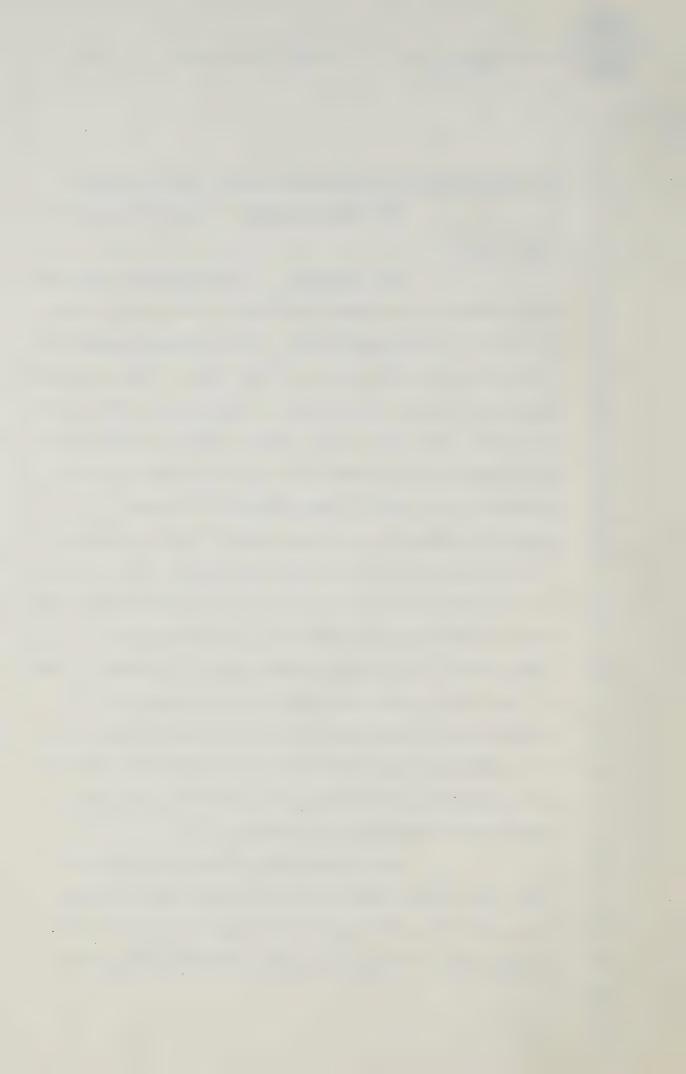
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Her doctorate is in biochemistry so I am fortunate.

THE COMMISSIONER: Should we put her under oath?

MR. STRATHY: I was going to say are you prepared to increase her hourly rate, but I hope you won't put her under oath. I must acknowledge that I have had the assistance of Miss Rae in the course of preparing these submissions. I would also like to make the point that while these are in effect a response to the submissions by Commission Counsel, they are not intended in any way to be critical of the way Commission Counsel have permitted or have presented the evidence, because I have said before that I thought it was presented in a most fair and comprehensive way. Some of which you see here are relatively fine distinctions of certain aspects of the evidence. of them are in our submission more substantial distinctions or references to the evidence that have to be made and should be made. We simply felt that it was appropriate to ensure that the record was as complete and accurate as could be.

We can see that there are some areas which are really questions of interpretation rather than questions of what the evidence is or isn't, but in any event, having said that, we offer them to you



for whatever assistance they will be to you.

Let me begin, Mr. Commissioner, with respect to other children by dealing very briefly with the case of Allana Miller. I wanted to make only two points with respect to Allana Miller. The first concerns the evidence of Nurse Bell. The second concerns the evidence as to how and by what means the child met her death.

All I am going to say to you about the evidence of Nurse Bell is that I don't propose to say anything about the evidence of Nurse Bell because I think Mr. Lamek has been absolutely fair in his characterization of that evidence and I really think I don't need to say anything further at all about it.

But with respect to how and by what means the child met her death there are two aspects of the evidence that Mr. Scott has referred to and I simply wanted to highlight those. The first is the question of resuscitation trauma for which there is evidence on the autopsy of damage done to the child's heart as a result of resuscitation efforts, and the evidence that Mr. Scott referred to with respect to the possibility that that trauma might cause an unbinding of the digoxin which she was admittedly receiving and which might account for the high levels



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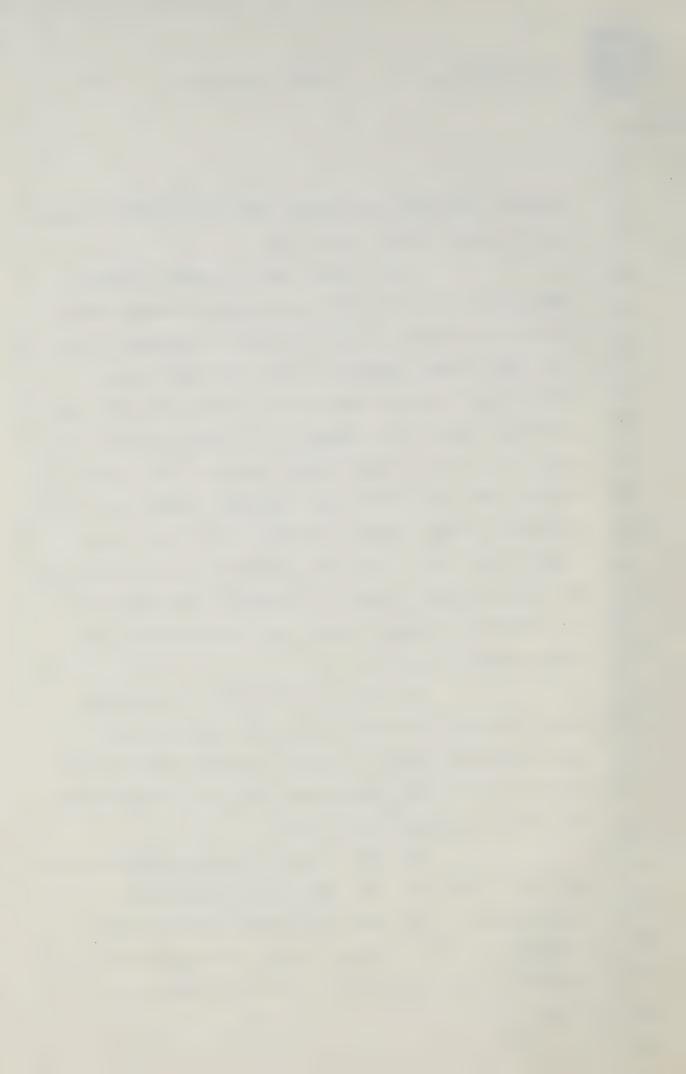
ound in her serum

found in her serum, and which incidentally might explain why the tissue levels are so low.

Now, I don't want to make too much of the tissue levels in the case of Miller because what I am going to submit to you, and what I do submit to you in this most recent exhibit is that the fixed tissue levels are virtually meaningless except that they tell you that digoxin was present. So, I am not going to make a lot of the fixed tissue levels in the case of Miller where the levels were virtually almost non-existent, either traces, I think, in the heart and none in the lung. But in my submission the concept of resuscitation trauma put forward by Dr. Spielberg in the case of Miller is one that would explain the toxicological evidence.

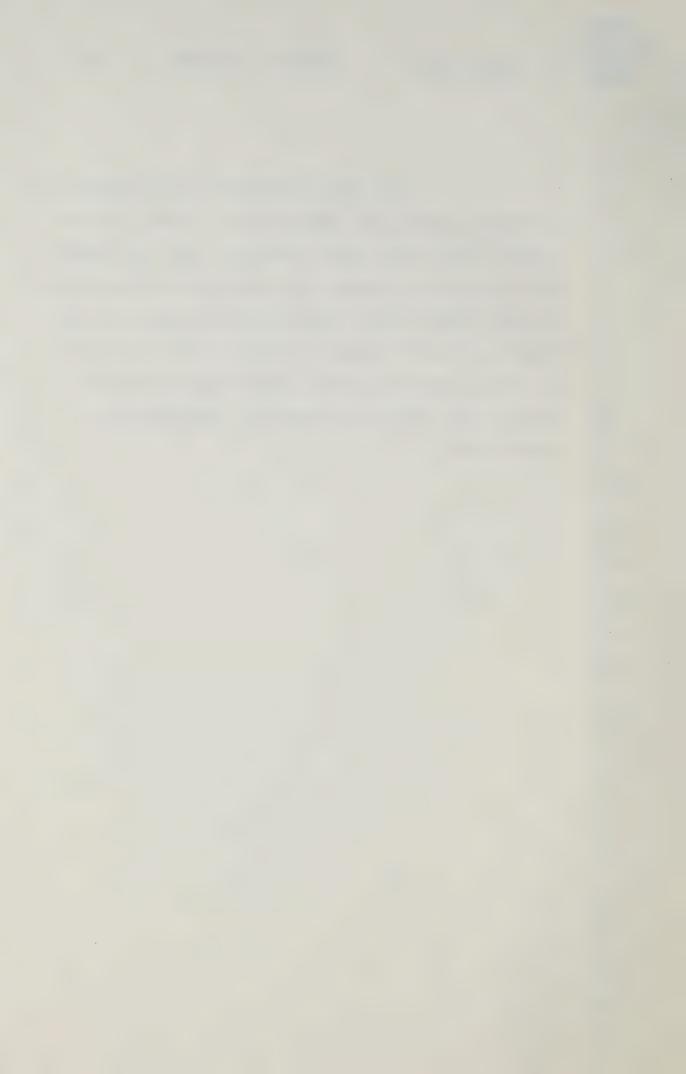
The other possibility -- and it has been referred to as well -- is that the child may have received a dose of digoxin in error either at the time the Lasix was administered at 2:40 in the morning or during the time of her arrest.

The point about the Lasix administration is that it did have, as they called, a temporal relationship to the onset of seizure activity which occurred at 2:45, so that if that Lasix was in fact digoxin it might explain why the child seizure at 2:45.



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The other possibility with respect to medication there, Mr. Commissioner, is that the same Digoxin which found its way onto the cart for Justin Cook was also on the cart in the case of Allana Miller. In other words, there had been on the same cart more than one vial of digoxin and that a vial of digoxin was administered to Allana Miller and subsequently another vial being overlooked was administered to Justin Cook.



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THE COMMISSIONER: Why should they have an adult vial on the crash cart on 4A/4B? would have to be an adult vial to have had any effect.

MR. STRATHY: Well I would suggest to you - I don't know why they would have an adult vial. What I would submit to you is it is entirely possible the vials got there in error; not that anybody thought that digoxin should be on the crash cart although there was apparently some in 4C. But they got there in error. They got confused. They got put on the cart in error.

So that the possibility exists that that drug digoxin did get on the crash cart and it was administered in the course of the child's cardiac arrest or in the course of the Code 25, and if that occurred, and given the impaired circulation of the child at and during the arrest, it may well explain why the serum level in the case of Allana Miller is so high and why the tissue levels, albeit fixed tissue levels, were fairly low.

The possibility of a medication error in the case of Allana Miller has been considered by a number of doctors who testified before you including Dr. Costigan, Dr. Rowe and Dr. Fay who pointed out that one would have to consider the possibility that the child was administered digoxin instead of Lasix at 2:40.



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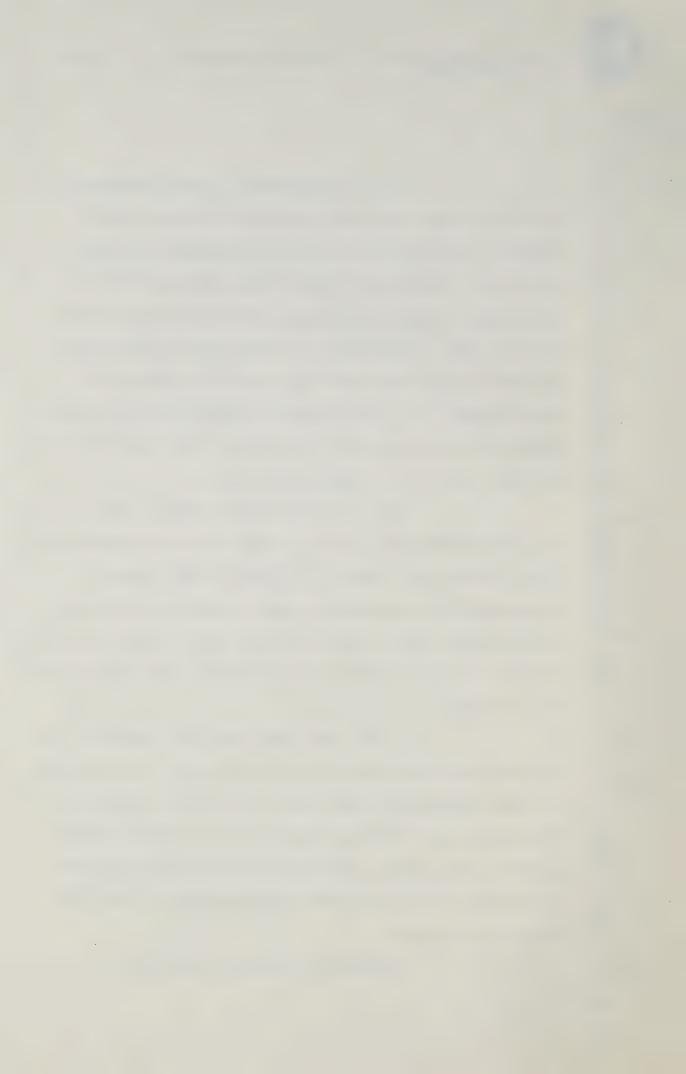
Given the pharmacological evidence to the effect that one adult ampule of digoxin could account for the level in the serum taken from the child post mortem, and given the evidence of Dr.

Hastreiter at the preliminary hearing at which time he said that if the dose had been given intravenously he would expect the onset of critical symptoms to occur within 5 to 30 minutes of administration, I would submit you must consider the possibility that this child was the victim of a medication error.

Now the next child I would like to turn to is Kevin Pacsai, and it is obvious with respect that if you accept Mr. Lamek's "killer on the loose" hypothesis with respect to Justin Cook you may well approach the case of Kevin Pacsai with a very serious question in your mind as to whether or not that child was murdered.

If on the other hand you consider the possibility that from the very beginning the approach to these deaths may have been covered by a murderer hypothesis and at Pacsai you run the risk as I have said of compounding the error by failing to consider the other I will call them natural explanations for the child's death.

In Pacsai's case I refer you in



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HH 3

particular to the abnormal pathophysiology explanation, an explanation which Mr. Lamek has asked you to discount, but which in my submission is just a little bit too easy to discount.

What I must say I find difficult in this whole exercise and a difficult problem to deal with is the case of Gary Murphy and what is extraordinary about the case of Gary Murphy is here you have a child with post mortem levels of I think 32 nanograms per millilitre and a child suddenly in the course of this whole exercise where we come up with a child who has got levels post mortem that are similar to levels found in some of the epidemic period children.

So an inquest is held into the child's death and Dr. Kauffman comes forward with a number of explanations and seizes on one explanation which he considers to be the most likely, the abnormal pathophysiologiy explanation.

Now I asked Dr. Kauffman about that when he first testified with respect to the Pacsai child, and I said have you ever in the literature or anywhere else heard of abnormal pathophysiology accounting for digoxin levels of this kind and he said no he did not. Then when he returned near the end of



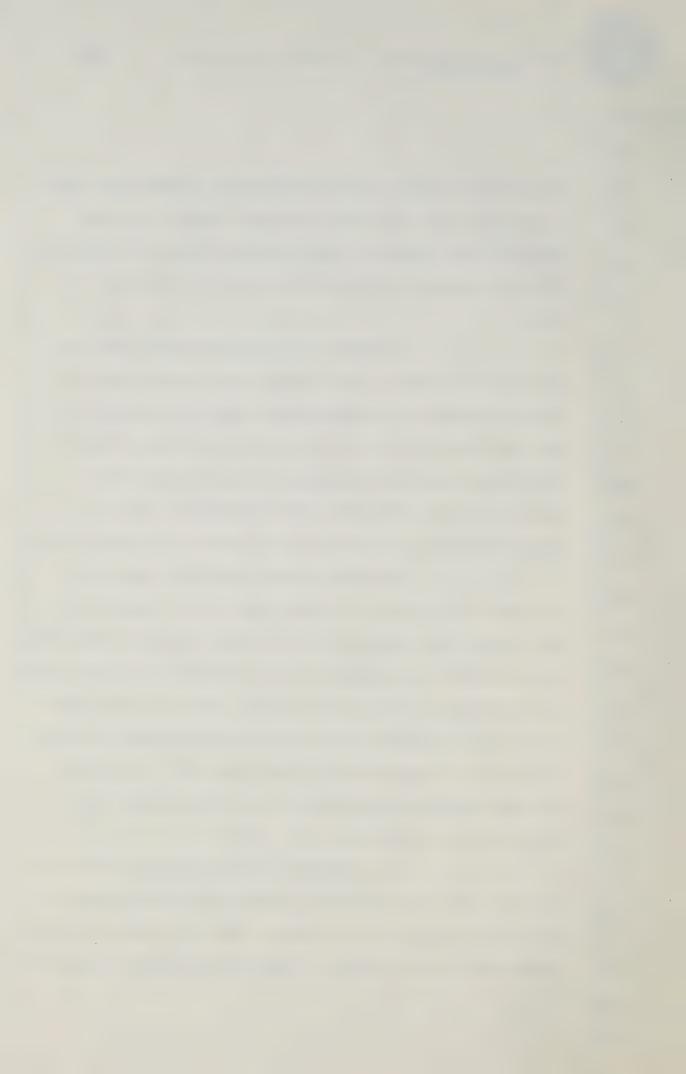
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the evidence stage of the Commission I asked him again. I asked you the last time, Doctor, whether you had heard of this before. Have you now since you testified heard of abnormal pathophysiology and he said no he didn't.

It seems extraordinary then that you can have the case of Gary Murphy put before you as a case of abnormal pathophysiology yet one can say as Dr. Kauffman did in the case of Kevin Pacsai, well, I discount abnormal pathophysiology because their conditions are different, and therefore I am not prepared to say that Pacsai is abnormal pathophysiology.

Balanced against that you have the evidence of I think Dr. Spielberg and Dr. MacLeod to the effect that they have seen other cases of what they characterize in a general sense abnormal pathophysiology in the Hospital for Sick Children, and they have seen cases where digoxin levels pre mortem have shot up to as high as 10 even where digoxin was not - or where digoxin had been administered but was stopped but the levels kept on going up.

Dr. Spielberg and Dr. MacLeod were both able to refer to instances of this pathophysiology at the Hospital for Sick Children, and they both testified that ante mortem levels as high as 10 could be explained



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by pathophysiology, and that those ante mortem levels were consistent with the levels found in the case of Pacsai.

In fact Dr. MacLeod rated the possibility of pathophysiology explaining Pacsai as high as 25% I think he said, and Mr. Scott has already referred you to the evidence of Dr. Spielberg with respect to that phenomenon.

Gary Murphy's case is a problem that just doesn't seem to go away, and it is a problem that causes us to perhaps reflect on what Mr. Scott has said about the embryonic state of our knowledge concerning digoxin because in my submission it is just too early on the state of the evidence to say that Pacsai was or was not a case of abnormal pathophysiology. And again with respect to Mr. Scott this may be a case where you have got to balance the opinions of two groups of eminent physicians: one group who says there is a natural explanation for this child's levels and another group that says no, it is an unnatural explanation, and you may fulfill your function in the case of Pacsai by simply saying this is the evidence and I am reluctant on the state of medical knowledge given the consequences of my report to go any further than that.

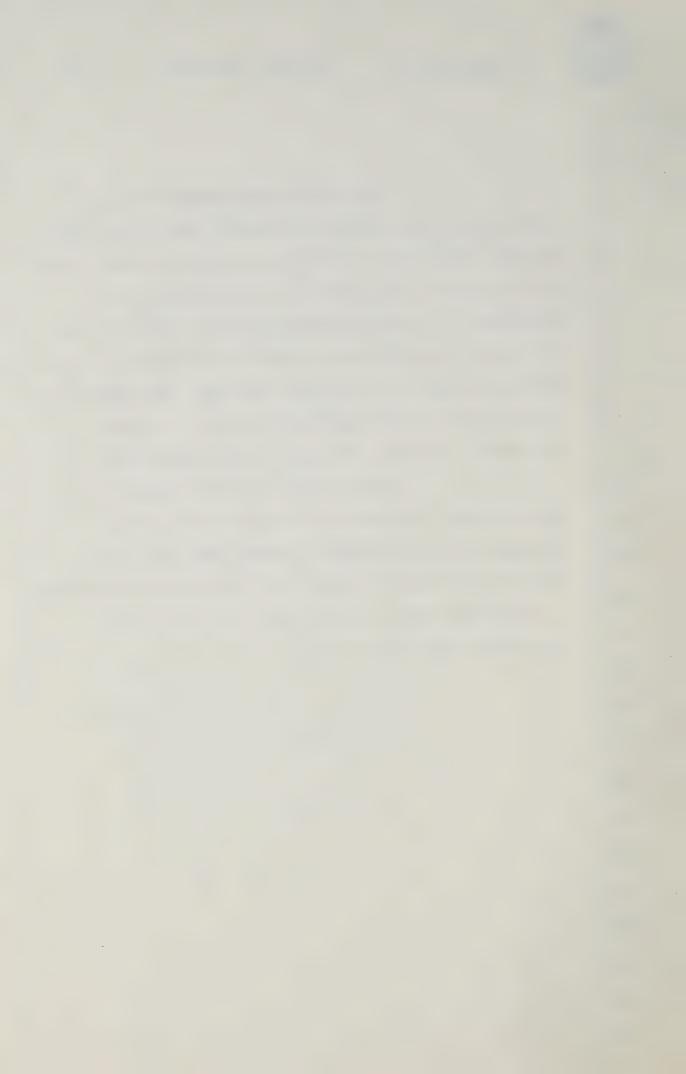


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I have made some comments in our submissions with respect to Pacsai, and I'm not going to read them to you, sir; just to refer to them. They are at page 13, our point No. 5 where there is a reference to on the right-hand column - the way this is set up the left-hand column is the evidence or the statements made by Commission Counsel. The right-hand column is our submissions with respect to those statements and the references to the transcript.

At point No. 5 we have commented on the evidence in support of the notion that the abnormal elevated potassium levels may have caused the elevated digoxin levels and the evidence pertaining to the relationship between the two, but I don't propose to read that to you.





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I ask you then, sir, to turn to the case of Janice Estrella. To put the case of Janice Estrella in a nutshell, I submit to you that there is a very serious doubt as to the integrity and the reliability of the digoxin level in the sample of

fluid taken from the child's gutter post mortem.

Mr. Scott has examined the evidence on this issue in some detail and I am not going to repeat it, but I do submit that if you are to put the evidence pertaining to this child on Mr. Scott's scales, your result is going to be entirely coloured or affected by the weight that you place on that Estrella sample.

I was frankly surprised to hear Mr. Sopinka this morning say, with respect to Estrella, that whatever it was - 24 out of 25 ain't bad or 27 out of 28, whatever you are looking at, ain't bad, because the problem you have got with Estrella is really twofold: Firstly, the sample that was taken from Janice Estrella was not taken in the sort of controlled scenario or controlled setting that the gutter blood study was done. We know that the gutter blood study did its best to try and duplicate the conditions in which the sample was taken from Janice Estrella but the fact of the matter is that it was

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simply a reconstruction and done under the circumstances that may or may not have been different.

I don't know what goes on at a post mortem but I suspect that there is all sorts of things that can be done that can result in different things taking place and different possibilities for contamination. That is the one point - it was simply a gutter blood study is at best a replication of what was done.

Quite apart from that, the problem

with Estrella is you don't know whether Janice
whether it
Estrella's was the one or/was one of the 26 or 27.

You just don't know. You can have no way of knowing.

So, to say 26 out of 27 ain't bad or to say the odds
are in favour of a clean sample rather than --

THE COMMISSIONER: That is part of the philosophy of just what I am supposed to do with this report. You see, everybody keeps telling me it is not a trial and, then, the minute I try to treat it as though it is not a trial, it then becomes a trial.

So, we have to be very, very careful about the finding.

MR. STRATHY: Well, I respectfully agree with that.

THE COMMISSIONER: Then it is a trial.

MR. STRATHY: No, but you do have to be very careful about the findings and you should not --



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THE COMMISSIONER: I am not going to say anything that I don't believe, but it is whether I should say, well, the state of digoxin knowledge is not sufficiently advanced for me to be certain about this and, therefore, I throw in the towel. That is not putting it the proper way by saying because of that, I don't intend to make a finding or whether I should make the best finding I can on the basis of the present --

MR. STRATHY: Just take the case of Estrella --

THE COMMISSIONER: The case of Estrella, if I can interrupt for a moment. What is wrong with the case of Estrella is that we really don't know how valid the reading is that is taken from the pelvic cavity.

MR. STRATHY: Exactly.

THE COMMISSIONER: So, we have done a test and the test has shown that with a reasonable precision, 24 out of 25 readings reflected gutter blood, reflected what was in the blood of the child. In one case it was wildly off. Because the one case was wildly off, do I say that we cannot rely on that or do I say, in my view, because 24 out of 25 say it is reliable, it is not unreasonable to treat it as



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reliable?

evidence.

MR. STRATHY: What I say, with respect, is that the gutter blood study doesn't help you in characterizing the Estrella sample as a good sample or a bad sample, because you don't know, you just don't know.

THE COMMISSIONER: We have the

MR. STRATHY: I beg your pardon? THE COMMISSIONER: We have the evidence of how Dr. -- who was it? Taylor, I think it was.

MR. STRATHY: Yes. But you don't know whether that sample, in the case of Estrella, is a contaminated sample or not.

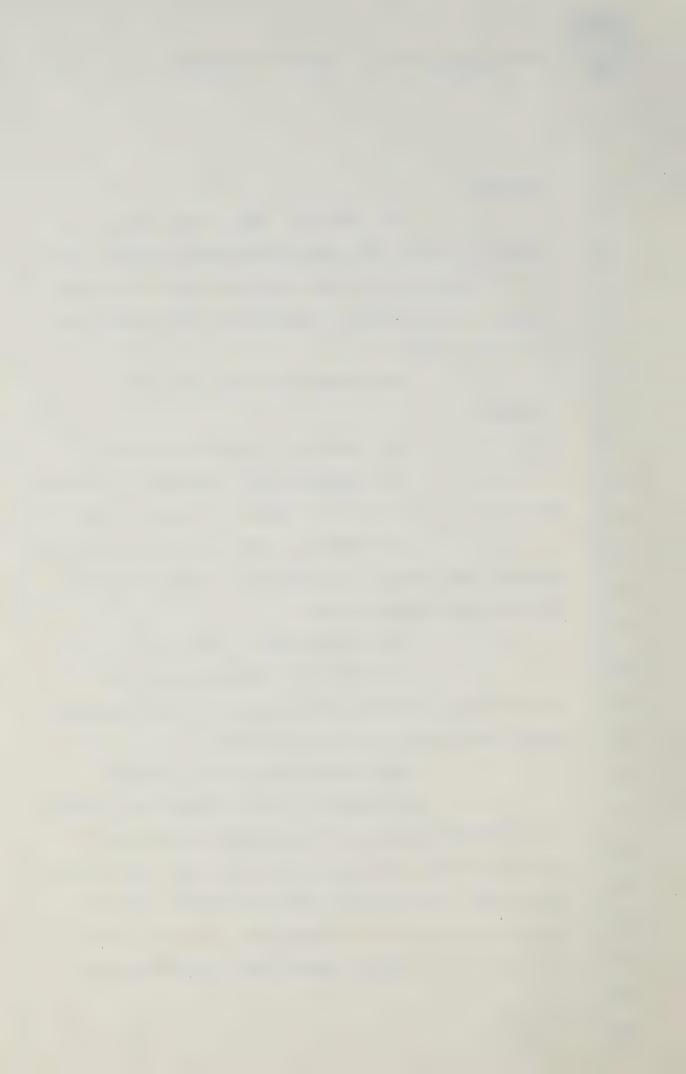
THE COMMISSIONER: No.

MR. STRATHY: You know when the gutter blood study was done that there was one sample that turned out to be out of whack.

THE COMMISSIONER: That is right.

MR.STRATHY: In my submission, Estrella is a perfect example for the proposition in that situation that you should simply lay out the evidence and leave it to others to decide if they think it can be done and, in my submission, it can't be done.

But if others think it can be done,



II5

probably died, you serve your function, with respect, by laying out the evidence and not taking that additional step and saying, well, I realize there are problems with it but this child probably, the sample probably, as a result of the gutter blood study, is a reliable one or it is reliable to 5 per cent.

THE COMMISSIONER: I should ignore the fact that, well-known to this small band of commissioners, let the readers turn to the last chapter first?

MR. STRATHY: That, I think, is the fundamental point of what I submitted to you this morning; that I have no doubt that you feel a compunction after all this time and after public money has been spent to produce a result, to have a bottom line, to have a tally, but I respectfully say, sir, that that is not what has been asked of you by the Attorney General and that you may do great harm in the case, in any one of these cases - but let's just take Estrella. If you say to the public, to the parents, in my opinion Janice Estrella did or did not die of a natural death, I can understand fully why you would feel the urge to do that and to put people's



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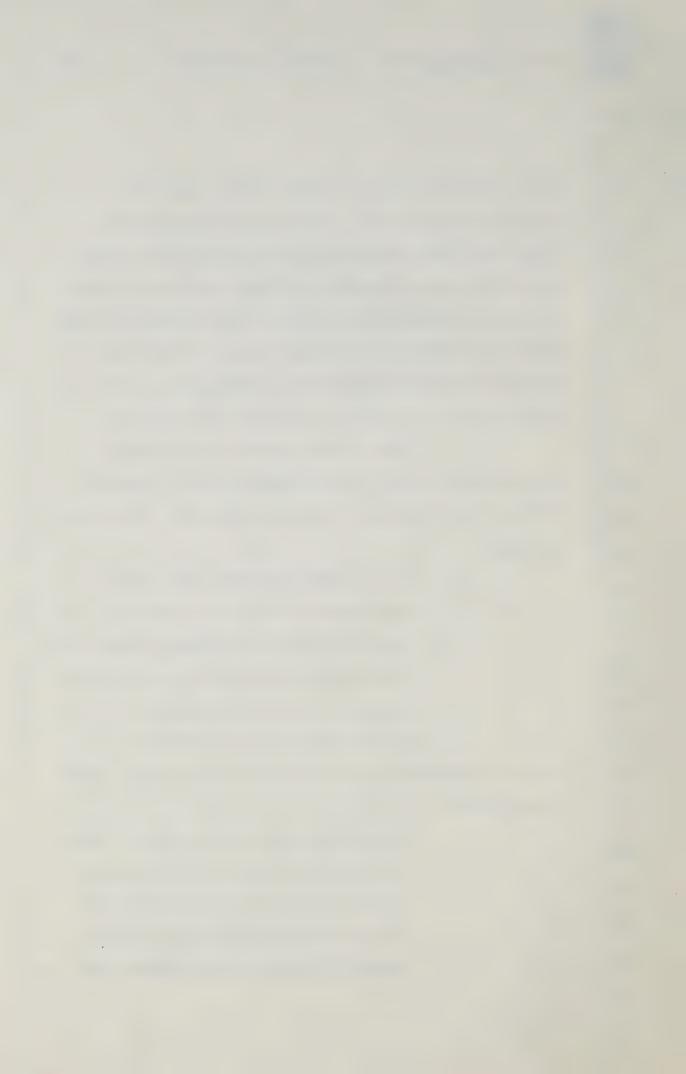
minds at rest one way or the other. But with evidence of this kind, in the case of Estrella, it could well be a very dangerous thing to do and it may fulfill your function by simply setting out the evidence, because the nature of the evidence is such that I'm afraid we will never know, in the case of Janice Estrella, whether that sample was one of the 24 or whether it was the anomaly, the 25th one.

Just on the subject of Estrella, I can refer you, sir, to our submissions at page 18, at the bottom of the page on the right-hand side, where we say:

> "It is submitted that the views of Drs. Hastreiter and Kauffman viz. that the findings in the gutter blood study considerably weakened the evidentiary value of the Estrella gutter blood results should be preferred."

That is preferred to Dr. Merkin's view of the gutter blood study.

> "Once it has been shown, as is demonstrated in Exhibit 238, that under conditions similar to, but more controlled than, those of the Estrella autopsy, a gutter blood sample can have



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a spuriously high digoxin level when the person performing the autopsy was totally unaware of any problems which might lead to contamination then no gutter blood digoxin level can be relied upon."

Then we go on really to say that each item of evidence with respect to each child must be considered and given weight according to its own validity. To ignore one piecé of evidence because it has no validity has no effect on the weight to be given to a quite separate piece of evidence, which must be judged on its own validity. That really is what Mr. Scott is saying and is in response to the argument of Commission Counsel that, to reject the Estrella gutter blood digoxin level is to ignore other indicia of digoxin intoxication in the Estrella case. What Mr. Scott said is, you really can't take a neutral or unreliable piece of evidence and use it to bolster another unreliable piece of evidence.

THE COMMISSIONER: I am not sure that that is an entirely valid question - anything that doesn't prove anything. Zero plus zero equals zero. I accept that, but where it is weak, it can be bolstered by other weak evidence. If the evidence points in a given direction -- we have been doing this



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since the beginning of time and you get a whole mass of little bits of evidence which, by themselves, don't mean much but put them all together and they add up to a reasonably perfect whole.

MR. STRATHY: As I took Mr. Scott's point, it was not that you were dealing with weak evidence; you were dealing with neutral evidence.

THE COMMISSIONER: But the reading of 72 in the gutter blood sample is not neutral. That decidedly leans one way. But the problem is whether it is reliable or not.

MR. STRATHY: It is not neutral. It wouldn't be fair to say it is neutral. What it is is a big question mark. Because, if it is meaningful, the scales go down this way.

about accomplices; now, we don't worry about accomplices any more; we worry about people of low moral calibre giving evidence. If we have one of them who says something which confirms something else said by somebody else, we accept and we take both pieces of evidence, even the one that is weak and unreliable because of the nature of the person giving it, and that adds to the value, if you like, of the evidence given by the person who has strong moral



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character.

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MR. STRATHY: I think the difficulty is, it is not as though you are comparing a strong moral character against a weak moral character; you are taking/piece: of evidence, the gutter blood evidence --

THE COMMISSIONER: Yes.

MR. STRATHY: -- you just don't know what it means.

THE COMMISSIONER: That is right.

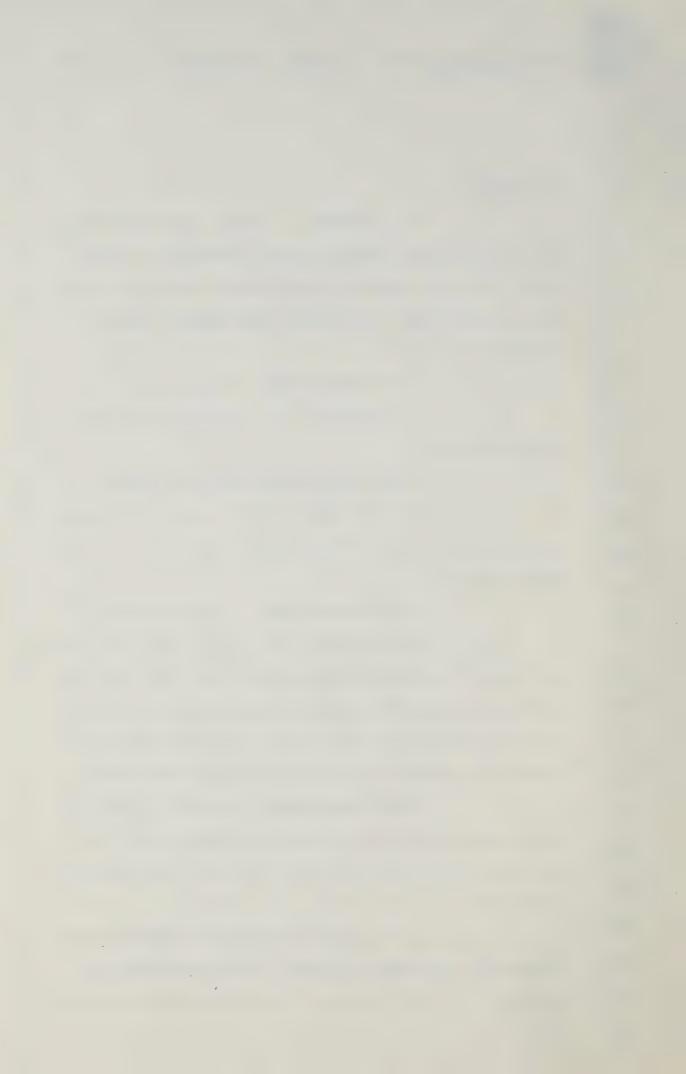
MR. STRATHY: If it is good, it weighs very heavily on the scale; if it is not good, it is meaningless.

THE COMMISSIONER: That is right.

MR. STRATHY: So, it is not that there are shades in between of whether it is very good or whether it is medium good. It is either good or it is bad, and you just don't know. And to take that piece of evidence which you just don't know about --

THE COMMISSIONER: Maybe it is good or it is bad, but it is not neutral; that is all I am saying. It is not a piece of evidence that can prove anything.

I am trying to think of examples but there are any number of them. They prove nothing whatever. I take a point in one direction or another



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direction. This evidence points only in one direction. The problem is whether it is --

MR. STRATHY: Reliable.

THE COMMISSIONER: -- reliable.

MR. STRATHY: Again, the point is that you should not take an unreliable piece of evidence which really doesn't tell you anything, frankly, unless you know how reliable it is and let it be bolstered up.

THE COMMISSIONER: All right. You have, for example, from the gutter blood, 72. You have an example from the heart - let's say it is 65. If you have those two, then it is not just the 65 you take; you take the 72 as well, because it is confirmatory of the 65 and the 65 is confirmatory of the other, and that gives validity to this other evidence you didn't have before.

MR. STRATHY: I think, with great respect, that is a tremendous danger to take two shaky pieces of evidence and allow them.

THE COMMISSIONER: The one I am taking of the heart would not be shaky, not from the heart tissue, but from the blood.

MR. STRATHY: That is precisely in the Estrella example what Commission Counsel asked you to



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do; take another piece of evidence like the fixed tissues, I think it was in the case of Estrella, another shaky piece of evidence.

THE COMMISSIONER: I gave a poor example. I should have said something acceptable to everybody.

MR. STRATHY: If you had that, we wouldn't be in this difficult spot that we are in.

I think the precise point is that so often - and it is nobody's fault - so often in these cases we are looking at evidence that is inherently unreliable.

THE COMMISSIONER: All right.

MR. STRATHY: It is just not appropriate to let one inherently unreliable piece of evidence prop up another one. It is not as though -- in a way, it is as though you are taking, to use your analogy, sir, three or four shaky accomplices of low moral fibre and let them all stand up and talk and conclude that, well, we have three or four of them talking; it therefore did happen.

Those are my points with respect to Estrella. I will forebear from reading the other parts of Estrella and simply refer you to them, sir.



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Now, I turn to Kristin Inwood and we have submissions with respect to him at page 20 and following which speak of the storage of the sample, the uncertainty as to what was done with the sample while it was stored and the uncertainty about the history of the sample.

In my submission, in many ways the

Inwood sample is a similar sort of situation to the

Estrella sample. I think if you can rely on it and

know that it is reflective of the child's ante mortem

level, then, bang, the scales go down on one side.

But Miss Cronk has said quite fairly that the full

and complete history of this sample is very much a

mystery. We are not dealing with a known. In my

respectful submission it would be inappropriate to

use this mystery, this sample, to try and solve another

mystery in the case of the Inwood child's death.

The other thing that I think is not a reasoned reaction but perhaps a consistent reaction in the case of Kristin Inwood that the sample seems so high that it almost seems unbelievable. It struck me as a situation almost as being told that you just wrote an exam in which you got 99 per cent; it is so just out of the realm of expectation that by in and of itself it seems an extraordinary sort of



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thing. Now, I know that it is --

MS. CRONK: Speak for yourself!

THE COMMISSIONER: That is what

happened with this gentleman; it was so high, they decided that it couldn't be valid.

MR. STRATHY: That is right!

THE COMMISSIONER: It had to be --

MR. STRATHY: Right. Right.

THE COMMISSIONER: And whether this

were right or wrong is a great pity.

MR. STRATHY: A great pity.

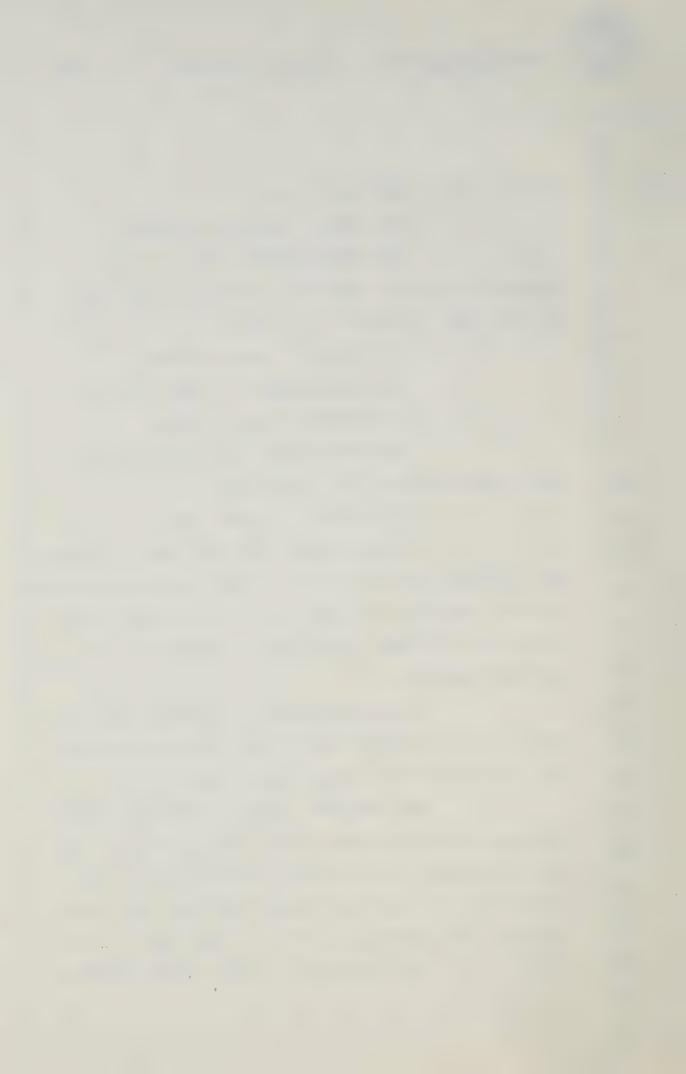
Inwood strikes you even more so because

491 in comparison to the levels that we have been seeing
in this Commission is just way out of the ball park
and, to me at least, that makes me scratch my head
and say something --

THE COMMISSIONER: I couldn't fuss too much about the decimal point there because even about 49.1 would still be a high level; right?

MR. STRATHY: Well, I think one of the witnesses made that point; that even if it was a tenfold difference, it would still be high, but I don't know if one can say that because you just don't know if it is off and how much off is it and why is it off.

Let me turn now to the three children,



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Hines, Belanger and Lombardo, who had digoxin in their exhumed tissues and let me deal with them as a group.

To begin with - and I would just like to simply point out four separate issues in the cases of those three children which you might refer to if those children are addressed as a group. The four general issues which is really toxicological issues are the issues of, first, the time for the elimination of tissue digoxin from the body after the administration of digoxin; secondly, what I would call the substance X issue and, in that compass, deal with gaschromatography, mass spectrometry; thirdly, the exhumed tissue issue and, fourthly, the error issue, which I have already addressed to some extent.

In respect to the first of those issues, the elimination time issue, that is dealt with on page 1 of our submissions. This really deals with the question of how long after a dose of digoxin does the digoxin remain in the tissue before it is completely eliminated from the body. I think I can summarize our submission on this point, Mr.

Commissioner, by saying that there is so little evidence with respect to that issue of how long it takes to get out of the body, that it would be unwise for you



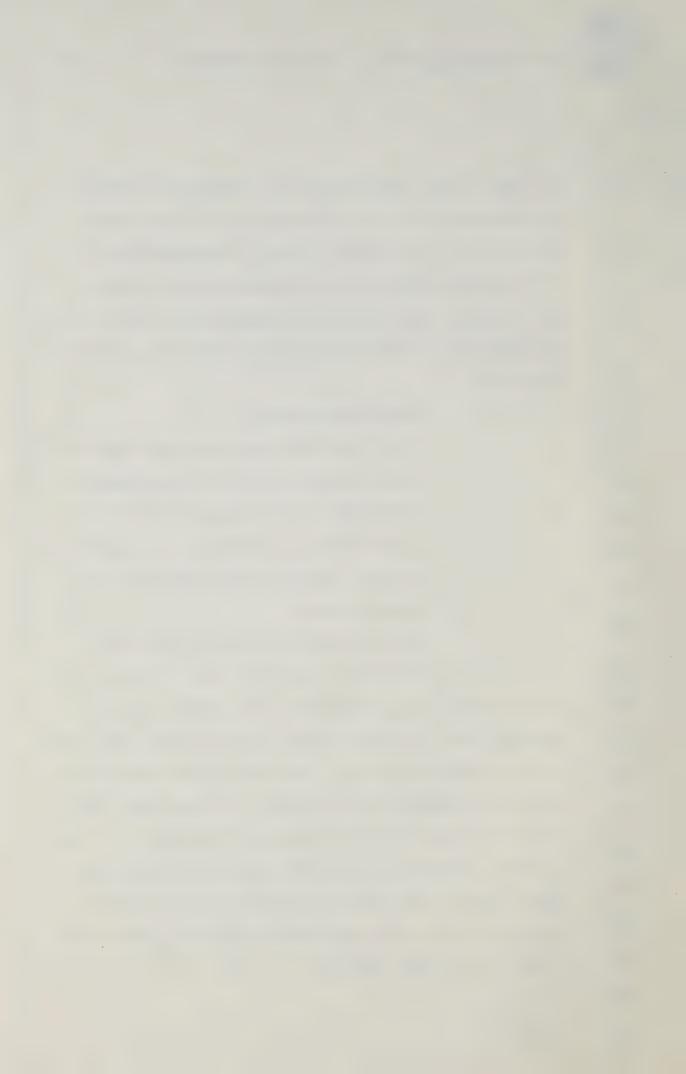
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to come to any conclusions. Dr. MacLeod's evidence is summarized at the very beginning of that issue, to the effect that once digoxin is administered in a therapeutic dose or in a supertherapeutic dose, it is found in a variety of tissues and simply will not disappear from those tissues within a predictable timeframe.

And then he says:

"All the times that you have heard in this hearing refer to disappearance from serum or disappearance from the plasma space...and that is a different animal, talking about disappearance from tissue."

So, the evidence seems to be that it would be a mistake to jump from the elimination from serum to the elimination from tissue and to conclude that they are in any way the same. The fact of the matter is that we just don't know how long it takes to disappear from tissue. We have dealt with that and I won't read it, sir, but pages 2, 3, 4 and 5 of our submissions all deal with that particular issue, and I think the bottom line is that there is just not sufficient knowledge in this one area where we are in digoxin infancy.



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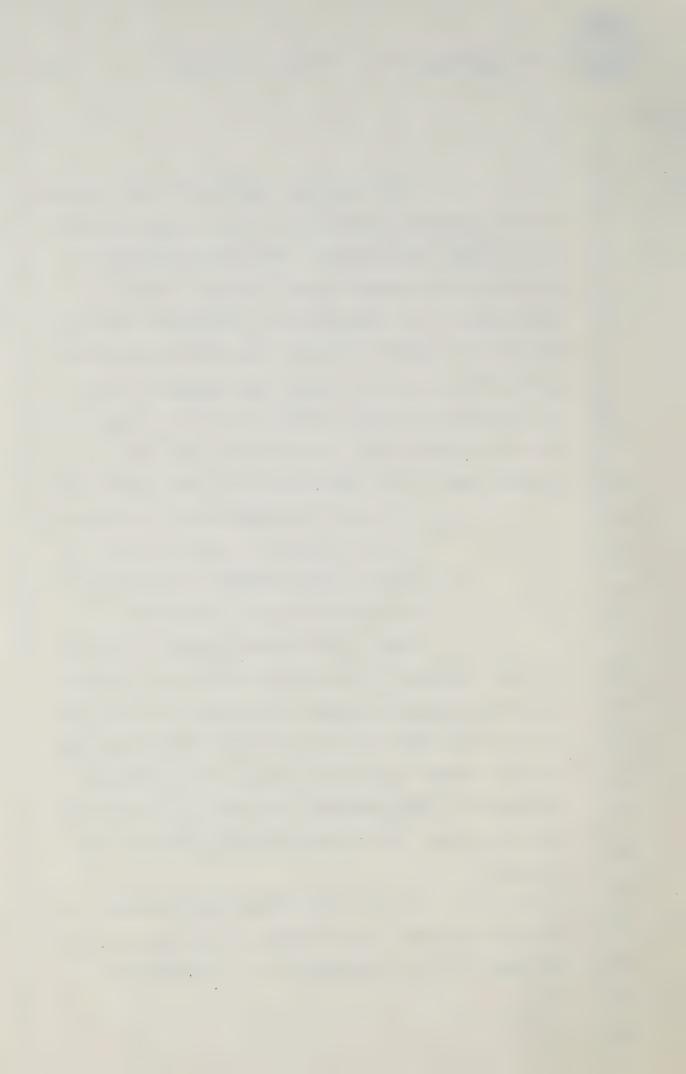
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Then the next question is the substance X issue, and our submissions in that regard are set out at page 7 and follows. The first submission deals with the attempt by Mr. Cimbura - this is paragraph a) - to replicate Dr. Seccombe's studies, and this is really, I think, in a sense a technical point, but Commission Counsel had suggested that Mr. Cimbura's process - this is set out at page 8 in the left-hand column, bottom of the left-hand column, page 8, the portion that we have underlined:

> "Finally, and again as an alternative, if it, substance X, was present, was in fact extracted or removed by his HPLC extraction process."

Now, I think that this may represent -in this statement of the words used by Mr. Cimbura, I think when he said "extraction process", he was not referring to HPLC; what he was referring to was when he first takes the sample, he puts it in methylene chloride, or adds methylene chloride to it and uses that to extract the digoxin from the serum of the tissue.

So, what Mr. Cimbura was talking about here was not HPLC, which is not an extraction process but which is, as I understand it, a separation



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process. And when he used the word "extraction", he was talking about extracting it with methylene chloride rather than extracting --

THE COMMISSIONER: Well, wasn't he talking about the whole process?

MR. STRATHY: Well, this is something that --

THE COMMISSIONER: As far as we know, he may have graduated from that. Now, that is all he does, and Cimbura had the extraction process, the IRA and the HPLC and then a further chloride.

MR. STRATHY: Well, it is my understanding - and Mrs. Rae has read and re-read Mr. Cimbura's evidence on this point and in our submission that is not clear that is what he in fact did. Maybe there is something that could be clarified by something as simple as a letter from Mr. Cimbura. We are not trying to suggest in any way that the evidence is incomplete; it is just that, as we read it, it is not clear that he was in fact using HPLC in this part of his studies. It is clear that in some parts of his studies he did use HPLC and IRA together but, when it came to duplicating Dr. Seccombe's work, it seems to us, with all due respect, that he was not talking about HPLC and IRA. Now, maybe he was and, if he was,



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then let's clarify it and the record will be complete, and perhaps that is something that I can talk to Miss Cronk about afterwards. But we simply felt that that should be pointed out.

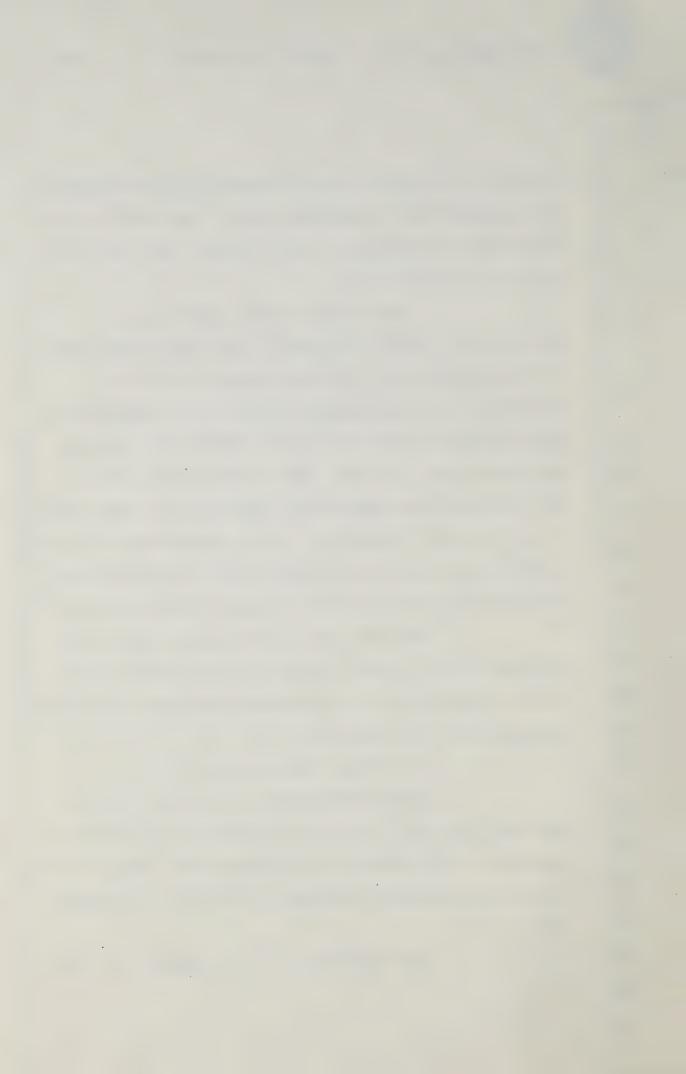
Then, also, on the question of Substance X, Point B on page 9...and following again in our submissions, it is not clear on all the evidence, and particularly in view of the preliminary data from Dr. Soldin set out in Exhibit 398, that is not clear that, in fact, HPLC or HPLC test used by Mr. Cimbura does separate out Substance X. And, again, it may be that it does but, in our submission, on the state of the existing evidence, this is an area where we would urge caution when you make findings of fact.

We have set out on pages 9 and 10 the evidence of Dr. Soldin and Dr. Seccombe with respect to the possibility of a confounding between digoxin and Substance X, even using HPLC.

And then, subparagraph c) --

THE COMMISSIONER: I'm sorry. I see that you got your -- maybe I'm reading what I'm not supposed to be reading, but I thought Mr. Cimbura, he did his testing entirely on serum, he did do it on tissue, too?

MR. STRATHY: I think what he did was,



he said there had been some on tissue but only very preliminarily and not in a quantitative way.

In other words --

THE COMMISSIONER: Oh, Mr. Strathy -MR. STRATHY: -- he did detect it.

If you look at the bottom of page 10, I was going to come to that.

THE COMMISSIONER: Unfortunately, that is where I was reading. I was reading, and that is the trouble. You give me all of this stuff and --

MR. STRATHY: You are entitled to read it all. We hope that you do read it all. But I think that on the very bottom of page 10, that is what he says, that he --

THE COMMISSIONER: A quantitative...?

MR. STRATHY: Quantitative data. But
he did find Substance X.

THE COMMISSIONER: It seems reasonable, I suppose, to find Substance X in the serum, and you would find it in the tissue as well.

MR. STRATHY: Well, the point that we take from that, though, is that there is no information at this stage as to how much Substance X you are likely to find in the tissue.

And then the last point under this heading is at page 12, Item 4, the significance of



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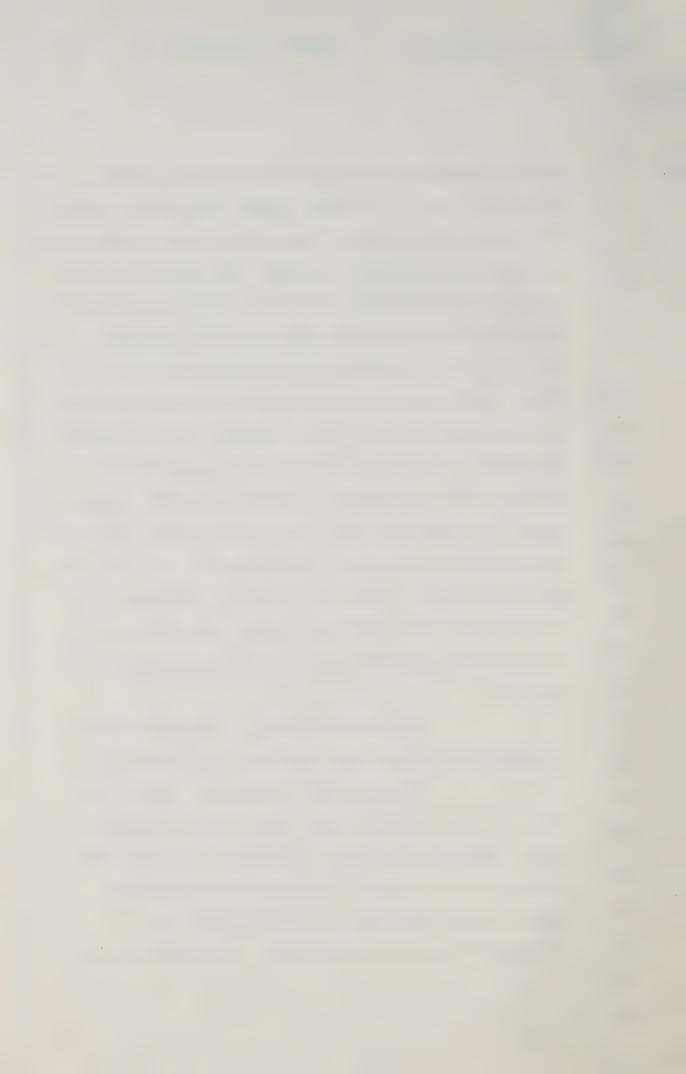
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gas chromatography and mass spectrometry results. one thing that is nice with these submissions is that it's the last time we'll have to say gas chromatography and mass spectrometry - I hope! And Miss Cronk, in referring to Belanger, I think in particular, and also Lombardo, there was the suggestion that somehow Mr. Cimbura's findings were confirmed by the use of GCMS, and we wanted to refer you to the conclusions of the digoxin expert panel, Exhibit 399 and Exhibit 400 and Exhibit 398, which really the opinions and correspondence contained in those documents suggest that the consultants had grave reservations about the satisfactoriness of Mr. Cimbura's GCMS. So that to say that those -- that Mr. Cimbura's findings are supported by his GCMS studies may overlook the reservations expressed by the experts that were consulted.

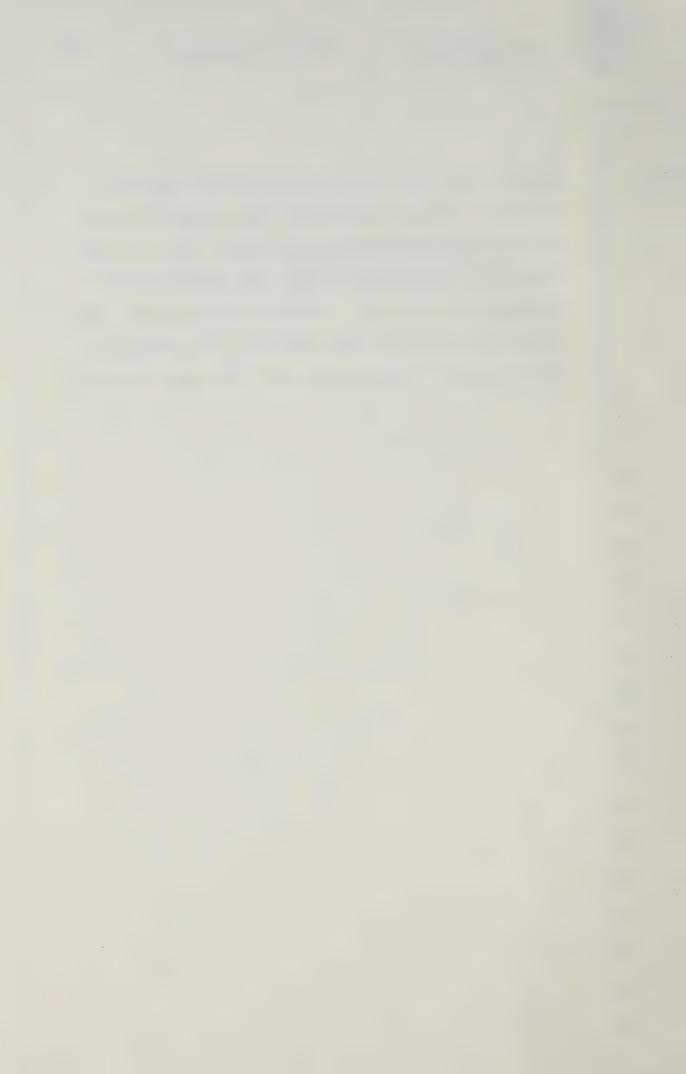
THE COMMISSIONER: I thought these exhibits did support his findings, the IRA and -
MR. STRATHY: Yes, with respect to

IRA, I think that is a very fair observation and I don't think we will want to in any way suggest that that is not the case. But what we are concerned about is that you might take the submission of

Commission Counsel with respect to this GCMS and



overlook the very serious reservations being expressed by these consultants with respect to the satisfactoriness of those studies. But it is true that, sir, the study did say that the HPLC-IRA method employed by Mr. Cimbura appeared to be the appropriate one for the detection of digoxin but not necessarily appropriate for the quantification.



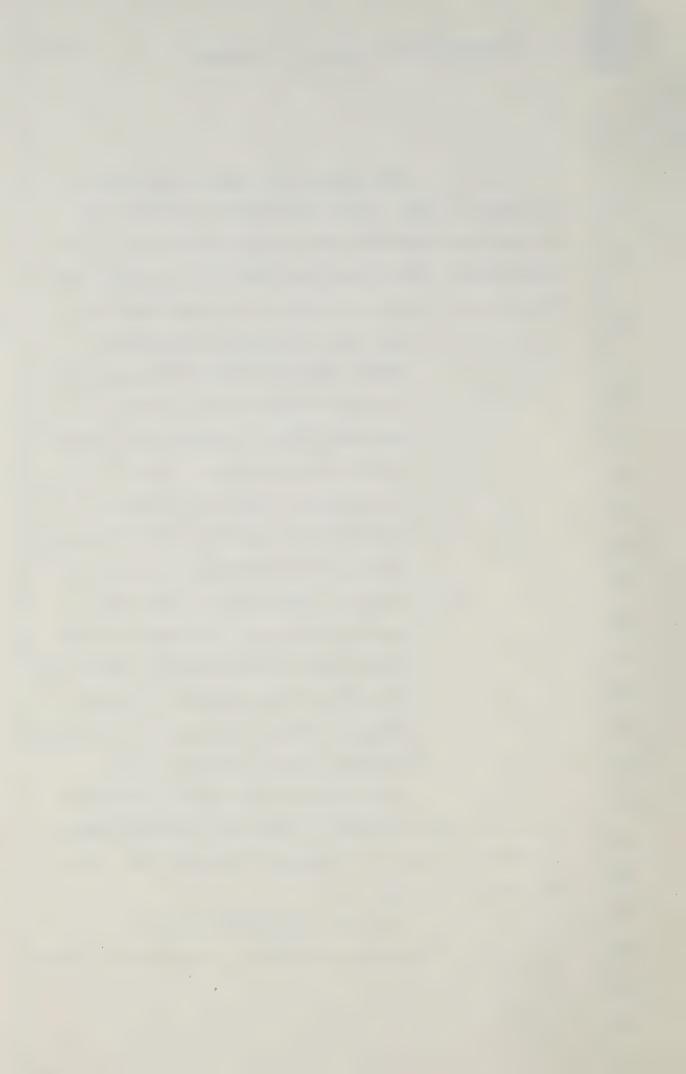
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The third issue under this group of children is what I call the exhumed tissue issue, and we have addressed that at various points in our submissions, particularly at page 15, 16 and 17, and the exhumed tissue reference of Dr. Kauffman is at the bottom of page 15 in the right hand column:

"These uncontrolled and unmeasurable variables (degradation of digoxin in embalming fluid, alterations of digoxin binding post mortem and tissue dessication) make it virtually impossible to quantitatively interpret digoxin concentrations in exhumed tissues. Therefore, as with the preserved tissues, the usefulness of these assays is essentially limited to documenting the presence or absence of digoxin. Alone, they do not necessarily indicate digoxin toxicity."

And then the answer of Dr. Hastreiter is set out with respect to fixed and exhumed samples and then at page 17 we quote Dr. MacLeod with respect to exhumed tissues:

"In fact, it is this intrinsic uninterpretability of post mortem tissues



that led us to believe that police and the coroner should stop exhuming bodies, those results cannot be interpreted other than in a strict qualitative sense as we have tried to do this morning."

And we go on to comment with respect to the lack of certainty with respect to fixed and exhumed tissues beyond simply using them for qualitative purposes.

And our submissions continue with respect to specific children at page 22. Our submissions with respect to Lombardo continue on to page 23. The Belanger on page 24, sir, and 25 and 26.

Mr. Commissioner, I think I would be about another 15 or 20 minutes. I could be finished by I would hope that time, but whatever you prefer is fine with me. I can be here tomorrow.

THE COMMISSIONER: I think you might as well go on. If you think it will, but we will put ten to five as the limit.

MR. STRATHY: Thank you.

THE COMMISSIONER: And if you don't

make it...



MR. STRATHY: I think I will be able to do it. I will do my best.

THE COMMISSIONER: Yes. All right.

MR. STRATHY: So, there you have the evidence with respect to the uncertainty pertaining to the use of exhumed tissues and fixed tissues.

The last general issue with respect to those three children was the error issue, and I wanted to refer you to the evidence of Dr. Spielberg at Volume 54.

THE COMMISSIONER: The volume?

MR. STRATHY: Volume 54, page 2137,

at the top of the page - this is the question continuing:

"After the five children in respect
of whom you posited that as a possibility
(accidental administration) only one
of them is in the group that we are
now considering. We are now considering
three additional children, not
including those five. Is it your
suggestion that the levels in the five
and the presence of digoxin in three
additional children, that is to say,
Hines, Belanger and Lombardo, may all
be explicable on the basis of medication
error.



A. I think what we are going to have to do is look at each one individually.

Q. Well, would you answer my question and perhaps you can give me an explanation of your answer.

A. Yes.

Q. Is it your suggestion that the five which you did address in the appendix to the Bain Report, plus the three whom I am now addressing may all be explicable either as to the level or as to the mere existence of the drug on the basis of medication error.

A. I think that has to be accepted as a hypothesis. I think there is better explanations in some of the patients than error.

Q. Well, perhaps at the end of the day we will find out how many we have to ascribe to error.

Certainly I take it that we have got three in the error category, have we not?

- A. Yes.
- Q. That is Hines, Belanger and



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Lombardo, because if those aren't error then they are something more sinister, are they not?

A. Or something that we don't understand, yes. "

And Dr. MacLeod's evidence with respect to those three children is at Volume 64, page 4280. At the bottom of page 4280:

"Q. Just with respect to that, Doctor, and recognizing that the administration could have occurred at the Hospital from which each of these children came, we have heard a good deal about the incidents of drug errors, as you know, and clearly they can and do occur, no question about it, and one has to accept the possibility that each of these children may have received one or more doses of digoxin by error. I have to ask you, in your view, is it likely that all three of them, and I tell you with the exception of Cook they are the only three of the 36 children with whom we are concerned who were not on digoxin, in your view is it likely that



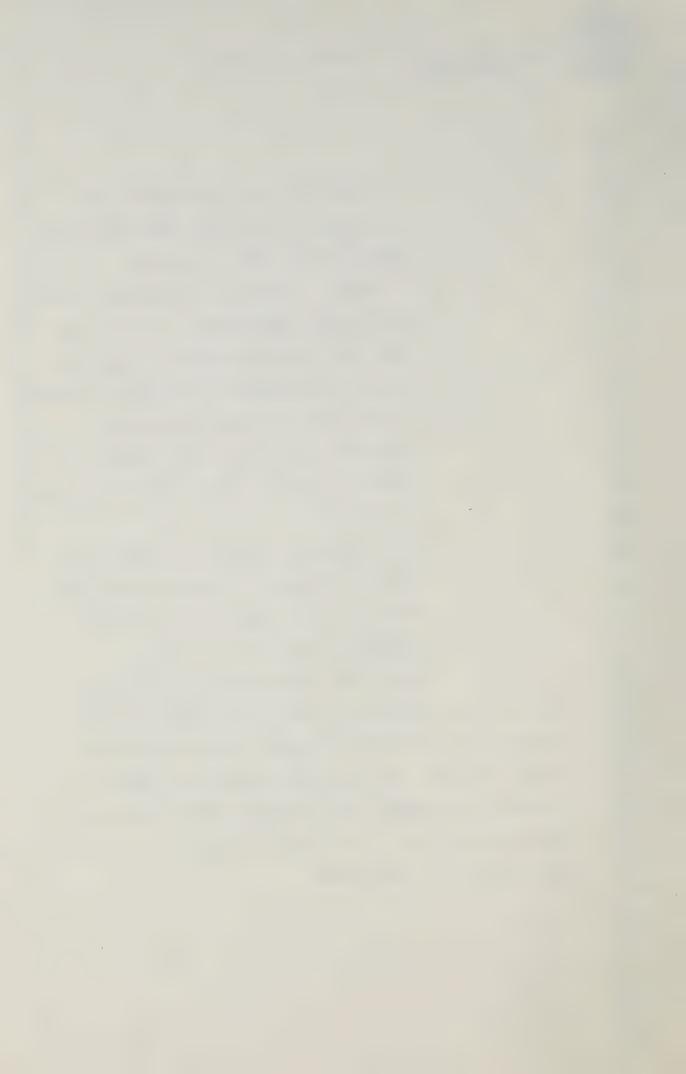
all three of them received digoxin by accident or is that something about which you can form an opinion?

A. Well, I think it is entirely within the realm of possibility. I know you have had testimony from Dr. Spielberg about the occurrence of medication errors and you have had some theoretical calculations based on the number of doses of digoxin on the cardiology ward.

Q. Yes.

A. I think it wouldn't be completely beyond the realm of possibility that three patients might have received digoxin in error."

Then Mr. Lamek goes on to ask him,
well, do you think it is likely that they did and
he said, and I think in fairness anyone would have
to say the same, that as you increase the number of
potential candidates for accidental administration it
becomes less likely. But again he put it as a possibility
which had to be considered.

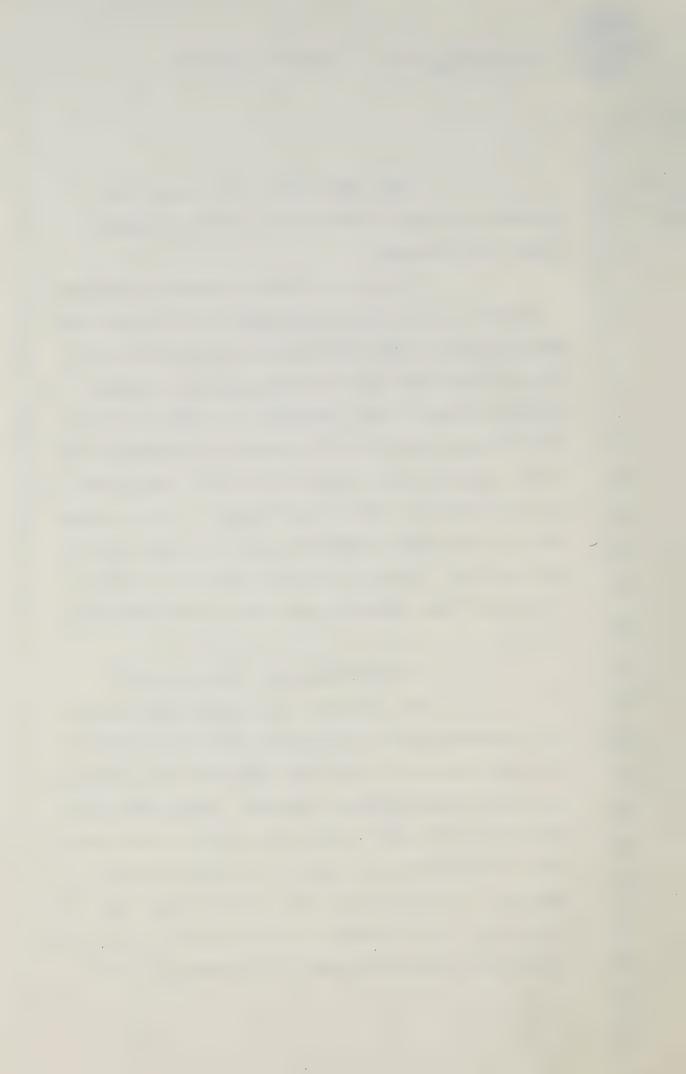


18jun84 KK2.1 EMTrc Just then let me add one or two comments on each of those three babies, Lombardo, Hines and Belanger.

I wanted to refer you to two pieces of evidence that may account for the child dying in the way she did in a natural way, and the first piece of evidence is the evidence of the resident on listening to the child's heart when he was called to the bedside and after the child had started to decline, he did not hear the characteristic heart murmur, a shunt murmur, that he would have expected to hear had the shunt been working. And that seems to me to be a clear indication that something was going wrong with that child.

THE COMMISSIONER: No autopsy.

MR. STRATHY: No autopsy, and that is an interesting point too because, as I said earlier, sir, the evidence is gone and there was some evidence that the child's body was exhumed. No evidence that any attempt was made to find out anything about the state of the shunt, if indeed it would have been possible to find that out after such a long time. But no autopsy, and it seems that the evidence is gone and we may never know the answer with respect to that



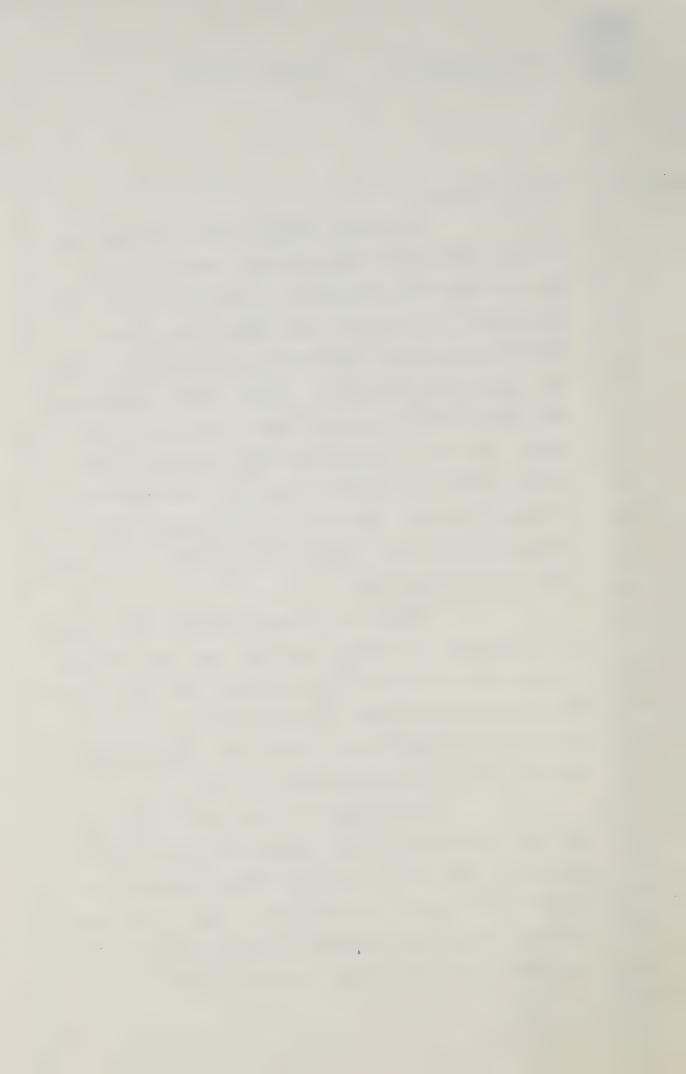
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child's death.

The other aspect of the evidence, sir, is that Nurse Bucci did not recall whether in fact she had administered heparin to the child's IV. You will recall the evidence that heparin had to be administered to keep the blood from clotting, to keep the shunt from closing up. There was no anticoagulation sheet or anticoagulant sheet contained in the chart. Another circumstance which perhaps if one wanted to put the interpretation on it that the dose of heparin was not administered, which might well account for the child dying in the way she did if the shunt was not kept open.

Simply in fairness to Nurse Bucci there is no evidence one way or the other that she did make such an error and forget to administer the drug to the child, but it does seem a little odd that in this particular case we have no record that she did do so and she has no memory of having done so.

With respect to Hines, sir, I am sure you will be hearing in due course from Mr. Tobias with respect to that child. The only thing I say to you is that with respect to Hines you do have in the case of Hines at the Sick Children's Hospital one of the -- apparently one of the world's experts on the



KK2.3

pathology of SIDS in the form of Dr. Becker. I think it was Dr. Rowe, who wasn't given to hyperbole, described Dr. Becker in that fashion, and as I understand Dr. Becker's evidence it was his view that the child's pathological findings were entirely consistent with Sudden Infant Death as an explanation for the child's death.

I don't want to jump into this debate about SIDS and to whether it is a diagnosis of exclusion or whether a missed-SIDS can never result in a SIDS death because frankly I don't fully understand all of that evidence. No doubt Mr. Tobias will put it before you, but it does seem to me with respect the case of Hines is one where there is a strong medical opinion that the child died from natural reasons.

The only other point I make about

Hines is that I wasn't here when Mrs. Hines gave her

evidence but reading her evidence I notice that she

said that she in her own mind having sat through the

Commission or having heard the evidence that had come

out from the Commission was able to come to a con
clusion as to how her child died, and that goes back

to what I said at the very beginning of the day as to

what your function has been in these proceedings or a



KK2.4

major part of your function in these proceedings, to simply let the evidence come out so the parents at least know, and let it come out in a civilized way that is fair to all concerned.

THE COMMISSIONER: That is a new role.

MR. STARTHY: Well, I know it is.

THE COMMISSIONER: I don't know whether

I can play it very well.

MR. STRATHY: I have no complaints.

As I said at the outset, sir, I know it is a new role and I know it is a role where you are inclined to dot the "Ts".

THE COMMISSIONER: I hope people never find out when I go back, if I go back, to judging again, ususally to conduct a discussion chamber --

MR. STRATHY: You can make a third option. You don't have to dissent or agree. You simply lay out the facts. But in fairness, it has been pointed out that this Commission is unprecedented in the history of the province, and in my submission there is a reason why that new role has been given to you and why you are not asked to dot every "T" or find an answer for everything.

The only other comment I had about Belanger was comments I have already made with



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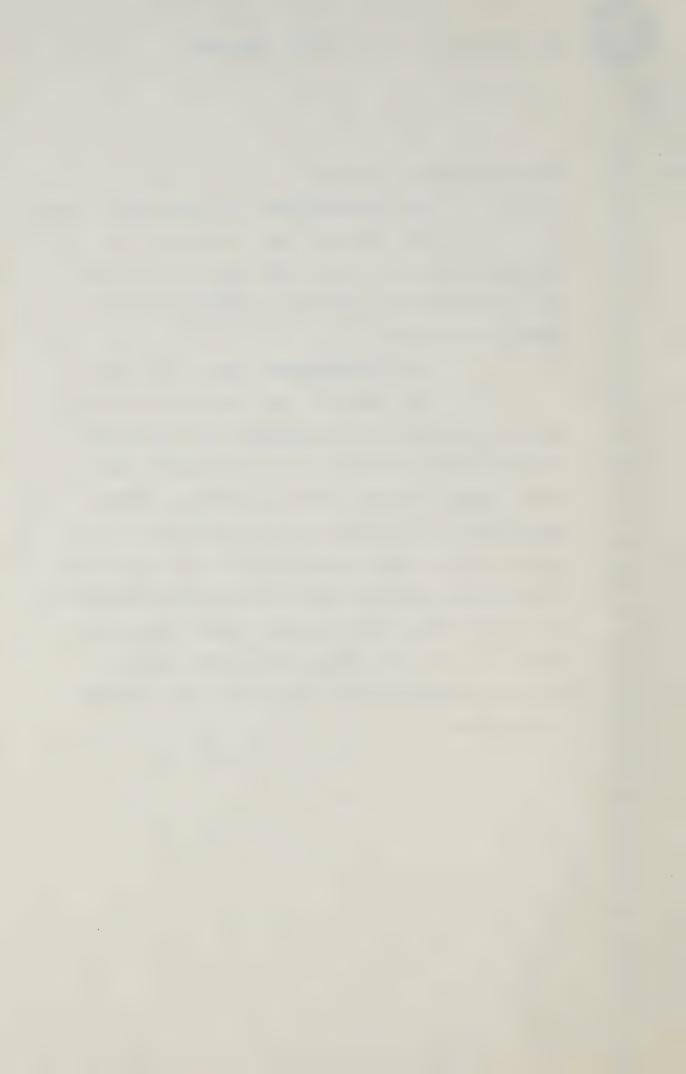
respect to exhumed tissues.

THE COMMISSIONER: You mean about Hines?

MR. STRATHY: No, excuse me. I'm finished Hines, sir. I was just going to Belanger and I don't have any additional comments beyond what I have already said.

THE COMMISSIONER: Yes. All right.

MR. STRATHY: And the last point pertains to the other deaths referred to by Commission Counsel at page 27 where Commission Counsel referred to the levels, digoxin levels in fixed or exhumed tissues and then compared them with therapeutic and toxic ranges in fresh tissue, and we simply made the point that to compare those fixed and exhumed tissues with fresh tissues is to compare apples and oranges and it is to give the fixed and exhumed levels a significance which none of the experts were prepared to give them.



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If you were going to weight the evidence of Dr. Hastreiter on the one hand against the evidence of Drs. Kauffman and Mirkin on a pharmacological issue there is good reason for you to prefer the evidence of Dr. Kauffman and Mirkin, the pharmacologists, as against the evidence of Dr. Hastreiter, the cardiologist eminent, though he may be.

Just in closing, Mr. Commissioner, I know that the mandate which I have suggested is yours, is not perhaps one that you feel comfortable with or one that you are used to, but in my respectful submission you perhaps should not make your task any more difficult than it already is, any more impossible than it already is by attempting to do more than what is expected of you and more than what can be reasonably expected of you .

I know that some of my friends will stand up and say to you that the public demands answers and the public expects answers and that the public will be disappointed if it does not get answers. In my submission, as the Court of Appeal has said, there are a number of interests that have to be balanced in this whole process and that in balancing those interests you may do the greatest ultimate justice by adopting the course which I cover respectfully



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put in front of you. Thank you, Mr. Commissioner. THE COMMISSIONER: Thank you, Mr. Strathy. Can you be of any help as to how long you or Mr. Hunt will be? MS. CECCHETTO: We should not be any more than an hour and a half to two hours. MR. YOUNG: We will not be longer than two hours. THE COMMISSIONER: Miss Kitely. MS. KITELY: Less than half a day, sir. THE COMMISSIONER: Well, I think between the three of you, you will occupy the day tomorrow. 10:00 tomorrow morning then. --- Whereupon the hearing was adjourned until Tuesday, June 19th, 1984 at 10:00 a.m.



